Utilities Rate Study and SDC Methodology Update

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Prepared for:

THE CITY OF DALLAS OREGON

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Executive Summary

Dallas is the sole provider of water, wastewater and stormwater management services to customers within the urban services boundary of the City. Revenues required to fund the delivery of these services are obtained from monthly user fees which are set by the City Council via its City charter authority. This study addresses the revenue required from rates needed to support future operations and maintenance costs for the utilities along with a funding plan for capital needs identified in the City's water and wastewater master plans. In addition to analyzing utility rates, this study updated the methodologies used by the City for the calculation of System Development Charges (SDC) for the three utility services.

With the active involvement of City staff, and input from the Utility Rate Advisory Committee (URAC), twenty year planning models were developed for this project; however, the focus for the rate study is the five year near-term forecast of fiscal 2014 through fiscal 2018. These financial models have been reviewed with the City as they were developed and will be provided to Dallas as a project deliverable enabling the City to make future updates.

The purpose of this study is to develop a cost of service-based methodology that will accurately determine the cost the city incurs to deliver water, wastewater, and stormwater management services. The models developed for this project have been populated with budget data for fiscal 2013, along with actuals for fiscal 2010, 2011, and 2012. During the first three months of 2013, the project team presented multiple utility rate and SDC scenarios to the URAC for their consideration. These model runs simulated the current service levels (CSL) of the utilities, and sensitivity cases for a number of funding issues facing the City's utilities. The results of each model run were expressed in terms of the rate impacts on the average single family residential customer's monthly bill for utility services, and in the case of SDCs, the impact on a newly constructed single family residence. Over the near-tem five year forecast horizon, water system revenue requirements are projected to rise by an average of 3.31% per year. Wastewater system revenue requirements (including costs assigned to stormwater management) are projected to increase by an average of 2.89% per year over this same timeframe. Finally, based on updates to the SDC methodologies for water, wastewater, and stormwater, the analysis indicates the City is justified in raising the total SDC charge for all three services from the current rate of $8,398 to $10,489 (for a single family residential home).

The URAC prioritized its funding needs and, by consensus, arrived at the preferred alternative water and wastewater rate and SDC schedules shown below in tables 1, 2, and 3:

Table 1 - Five Year Forecast of Water Rates

City of Dallas, Oregn
Water System Rate Study Update 2012
Proposed Schedule of Water Rates

Line Item Description	Budget 2013	Forecast 2014	2015	2016	2017	2018
Inside City:						
Base charge (monthly)	$ 15.7536	$ 16.1377	$ 16.5438	$ 16.9241	$ 17.2987	$ 17.6202
Use (commodity) charge						
Residential						
Base	1.0022	1.0352	1.0697	1.1057	1.1432	1.1825
Extra capacity - maximum day	0.5624	0.5803	0.5989	0.6183	0.6385	0.6596
Extra capacity - maximum hour	0.1080	0.1107	0.1135	0.1163	0.1192	0.1222
Total	1.6726	1.7262	1.7820	1.8403	1.9009	1.9643
Commercial/Industrial:						
Base	1.0022	1.0352	1.0697	1.1057	1.1432	1.1825
Extra capacity - maximum day	0.2218	0.2288	0.2362	0.2438	0.2518	0.2601
Extra capacity - maximum hour	0.0728	0.0746	0.0765	0.0784	0.0803	0.0823
Total	1.2967	1.3387	1.3823	1.4279	1.4754	1.5249
Wholesale:						
Base	N/A	N/A	N/A	N/A	N/A	N/A
Extra capacity - maximum day	N/A	N/A	N/A	N/A	N/A	N/A
Extra capacity - maximum hour	N/A	N/A	N/A	N/A	N/A	N/A
Total	-	-	-	-	-	-
Outside City:						
Base charge (monthly)	$ 31.51	$ 32.28	$ 33.09	$ 33.85	$ 34.60	$ 35.24
Use (commodity) charge						
Residential:						
Base	1.5032	1.5528	1.6045	1.6585	1.7149	1.7738
Extra capacity - maximum day	0.8436	0.8704	0.8983	0.9274	0.9578	0.9894
Extra capacity - maximum hour	0.1621	0.1661	0.1702	0.1745	0.1788	0.1832
Total	2.5088	2.5893	2.6731	2.7604	2.8514	2.9464
Commercial/Industrial:						
Base	1.5032	1.5528	1.6045	1.6585	1.7149	1.7738
Extra capacity - maximum day	0.3327	0.3433	0.3543	0.3658	0.3777	0.3902
Extra capacity - maximum hour	0.1092	0.1119	0.1147	0.1176	0.1205	0.1235
Total	1.9451	2.0080	2.0735	2.1418	2.2131	2.2874

Table 2 - Five Year Forecast of Wastewater Rates

City of Dallas, Oregon
Wastewater Rate Study Update - 2013
Schedule of Current and Recommended Wastewater Rates

Line Item Description	Budget 2013	Forecast 2014	2015	2016	2017	2018
Consumption Based Rates:						
Customer Account Service (BASE) Charges:						
Inside City monthly	$ 34.61247	$ 35.39017	$ 37.84435	$ 39.29063	$ 39.85826	$ 40.39729
Commodity (USE) Charges:						
Single Family Residential						
Sanitary flow and I&I	0.62796	0.64488	0.53544	0.50640	0.54923	0.59307
Strength - BOD	0.13557	0.13927	0.11153	0.10377	0.11387	0.12421
Strength - TSS	0.13550	0.13919	0.11147	0.10371	0.11381	0.12414
Total - $/Ccf	$ 0.89904	$ 0.92334	$ 0.75845	$ 0.71388	$ 0.77691	$ 0.84141
Multi-Family						
Sanitary flow and I&I	0.62796	0.64488	0.53544	0.50640	0.54923	0.59307
Strength - BOD	0.13557	0.13927	0.11153	0.10377	0.11387	0.12421
Strength - TSS	0.13550	0.13919	0.11147	0.10371	0.11381	0.12414
Total - $/Ccf	$ 0.89904	$ 0.92334	$ 0.75845	$ 0.71388	$ 0.77691	$ 0.84141
Commercial I						
Sanitary flow and I&I	0.62796	0.64488	0.53544	0.50640	0.54923	0.59307
Strength - BOD	0.13557	0.13927	0.11153	0.10377	0.11387	0.12421
Strength - TSS	0.13550	0.13919	0.11147	0.10371	0.11381	0.12414
Total - $/Ccf	$ 0.89904	$ 0.92334	$ 0.75845	$ 0.71388	$ 0.77691	$ 0.84141
Commercial II						
Sanitary flow and I&I	0.62796	0.64488	0.53544	0.50640	0.54923	0.59307
Strength - BOD	0.16947	0.17409	0.13941	0.12971	0.14234	0.15526
Strength - TSS	0.16938	0.17399	0.13934	0.12964	0.14226	0.15517
Total - $/Ccf	$ 0.96680	$ 0.99296	$ 0.81420	$ 0.76575	$ 0.83383	$ 0.90350
Commercial III						
Sanitary flow and I&I	0.62796	0.64488	0.53544	0.50640	0.54923	0.59307
Strength - BOD	0.20336	0.20890	0.15565	0.15565	0.17080	0.18631
Strength - TSS	0.20325	0.20879	0.15557	0.15557	0.17071	0.18621
Total - $/Ccf	$ 1.03457	$ 1.06258	$ 0.84667	$ 0.81762	$ 0.89075	$ 0.96558
High Strength						
Sanitary flow and I&I - $/Ccf	0.62796	0.64488	0.53544	0.50640	0.54923	0.59307
BOD - $/lb	0.23725	0.24372	0.19518	0.18160	0.19927	0.21736
TSS - $/lb	0.23713	0.24359	0.19507	0.18150	0.19916	0.21724
Total - $/Ccf	$ 1.10234	$ 1.13219	$ 0.92570	$ 0.86949	$ 0.94767	$ 1.02767
Flat Monthly Rates:						
Single Family Residential flat rate:						
BASE charge	$ 34.61	$ 35.39	$ 37.84	$ 39.29	$ 39.86	$ 40.40
USE charge	6.29	6.46	5.31	5.00	5.44	5.89
Total - $/account/month	$ 40.91	$ 41.85	$ 43.15	$ 44.29	$ 45.30	$ 46.29

Note: High strength customers that contribute wastewater that exceed a strength threshold of 350 mg/l BOD or 350 mg/l TSS will be charged based on their actual flow and load.

Table 3 - Recommended Schedule of Water, Wastewater, and Stormwater SDCs for Single Family Residential Customers

City of Dallas
Comparison of Current and Proposed Residential SDCs by Fee Type
Per Equivalent Dwelling Unit

	Reimbursement	Improvement	Total
Proposed:			
Water	1,154	2,973	4,127
Wastewater	1,495	3,792	5,287
Stormwater	9	1,066	1,075
Total proposed	$ 2,658	$ 7,831	$ 10,489
Current:			
Water	-	3,752	3,752
Wastewater	-	3,834	3,834
Stormwater	-	812	812
Total current	$ -	$ 8,398	$ 8,398
Difference:			
Water	1,154	(779)	375
Wastewater	1,495	(42)	1,453
Stormwater	9	254	263
Difference	$ 2,658	$ (567)	$ 2,091

The schedules of utility rates and SDCs shown above were developed through consultation with City staff and the members of the URAC. A number of specific policy recommendations were developed through this collaboration, and are briefly discussed in this executive summary. At their third meeting on March 28, 2013, the URAC developed a list of utility rate and SDC policy recommendations for City Council consideration. Itemized below is a listing of these policy recommendations.

- Treatment of the estimated $114,000 in uncollectable/past due utility billings – Over many years, the City has accumulated a utilities (water and wastewater) uncollectables balance that has reached $114,000 by March, 2013. The URAC is aware of this uncollectables balance and recommends the following to the City Council for their consideration and action:
  - ✓ Do not raise rates now to recover the $114k in uncollectables/past due billings. The one time rate spikes is not necessary
  - ✓ Implement business policies to reduce the risk of uncollectables in the future
  - ✓ Develop a business policy on bad debt charge-offs
- Water rate structure – The City's current water rate structure encourages customers to use more water by reducing the unit price as water is consumed. This rate structure is called "declining block". The URAC spent considerable time analyzing and discussing the merits of this rate policy, and is recommending the City move away from this rate structure. The specific URAC recommendations to the Council for an alternative water rate structure are:

- ✓ Eliminate the current split season, declining block water rate structure
- ✓ Continue to have a monthly base fee that does not vary by meter size
- ✓ Replace the split season, declining block commodity rates with a uniform average commodity rate that remains constant across the entire range of water consumption regardless of season.
- ✓ Establish differentiated uniform commodity rates for residential and commercial customer classes. These differentiated commodity rates are based on each class's respective contribution to peak day demand. The estimated commodity rates for FY14 are:
  - ❖ Residential - $1.7262 per Ccf
  - ❖ Commercial - $1.3387 per Ccf
- ✓ Establish a policy on the development of industrial water rates that is flexible and will allow the City to attract and retain an industrial customer base

- Wastewater rate structure – The City's current wastewater rate structure conforms to industry norms, but needs some modifications for rate equity and to better facilitate the City's management of the types and strengths of discharges that enter the wastewater system. Accordingly, the URAC recommended that the City consider the following wastewater rate revisions:
  - ✓ Move commercial and multifamily wastewater customers off of the "winter average" method of estimating flows to the wastewater system; and replace it with actual monthly metered water consumption for each respective commercial and multifamily customer.
  - ✓ Modify the current commercial customer class, to include low, medium, and high strength sub classes.
  - ✓ Create a new industrial extra strength customer class
- Stormwater management – Currently, stormwater management operations are funded from wastewater rates and some capital needs through stormwater SDCs. The URAC spent time discussing the merits of developing a dedicated funding source for stormwater work through the creation of a stormwater utility. The Committee agreed that stormwater costs will continue to increase and will occupy a growing proportion of the wastewater rate over time. However, without a current stormwater master plan to establish program needs, the creation of a stormwater utility at this time would be premature. The URAC recommended the following:
  - ✓ Before any action is considered for the creation of a standalone stormwater utility, the City should first commission a new stormwater master plan
- System Development Charges – The City's SDC methodologies have not been reviewed/updated for some time (8 years for water and stormwater, and 13 years for wastewater). Based on direction from the URAC, the project team reviewed the methodologies from scratch, and presented their findings to the Committee. After review, the URAC is recommending the following to the Council relative to water, wastewater, and stormwater SDC methodologies:
  - ✓ Change the current SDC methodology for water, wastewater, and stormwater to include the reimbursement element of the SDC
  - ✓ Update the current improvement fees to take the most current adopted capital improvement plans into account for water, wastewater, and stormwater

- ✓ Upon Council approval, direct City staff to proceed with the statutory notice provisions contained in ORS 223.304
- ✓ Between SDC methodology updates, adjust water, wastewater, and stormwater SDCs for inflation based on an annual changes in the Engineering News Record's Construction Cost Index for the City of Seattle.

Analysis Section

Water Rates

Analysis of Water System Revenue Requirements

This analytical task determines the amount of revenue needed from water rates. This is driven by utility cash flow or income requirements, constraints of bond covenants, and specific fiscal policies related to the water utility. Based on three years of actual financial records (i.e., fiscal 2010 through 2012), and for the current budget year 2013, a base case analysis was developed. This case is predicated on a number of planning assumptions. These planning assumptions are discussed in detail below.

For the current budget year (fiscal 2013), it is forecasted that the water utility will generate sufficient revenues from rates, charges and fees to meet its obligations and produce an unappropriated ending balance in the water operating fund of $512,761. The beginning balance for the water operating fund in this same fiscal year was $513,778. In order to establish and maintain cash balances in the water operating fund while continuing to support the funding of future capital requirements, a general water rate increase of 3.05% in fiscal 2014 is required. Based on discussions with the City Staff, this general rate increase should be implemented on June 1, 2013.

For the forecast of revenue requirements, the following assumptions were made based on discussions with City staff and the URAC:

Inflation in costs and growth in the customer base – In order to accurately reflect likely future conditions, the revenue requirements model was programmed to allow for inflation and cost escalation factors by budget line item. Per guidance from City staff, the following factors were applied for estimating future cost escalation:

- All direct labor line items – 3.0% per year
- Pension plan contributions (City cost) – 5.0% per year
- Health insurance premiums (City cost) – 8.0% per year
- Professional services (OMI contract) – 3.0% per year
- All other operating expense line items – 3.0% per year
- The growth forecast expressed in the annual increase in 3/4" meters is estimated to be 0.50% per year over the five (5) year forecast horizon.

Capital Improvement Plan Funding - In the current fiscal year, total water system capital improvement costs are estimated to be $128,750, and consist of $51,500 for small diameter pipe replacements, and $77,250 for the replacement of an influent pump at the water treatment plant. The current budget assumes these capital improvement costs will be funded from cash on hand.

Between fiscal 2014 and 2017, the City's water system capital improvement plan calls for the investment of $4,008,769. The water system financial plan calls for all of these costs to be funded from the proceeds of future revenue bonds (one bond in each future fiscal year). The resulting debt service on these bonds is to be paid from water rates. The key planning assumptions for the issuance of these future water system revenue bonds are:

- Life of each issuance – 20 years
- Interest rate – 4.50%

- Issuance costs – 1.0% of gross borrowings
- Coverage requirement – 1.25 times annual debt service
- Reserve requirement – one year's annual debt service

Under the current water system financial plan, by the end of fiscal 2016, the City will add an additional $321,233 of annual revenue bond debt service to the water system revenue requirements. The debt sizing cash flows and resulting debt service calculations are shown below in Table 4.

Table 4 - Forecast of Future Water System Borrowings and Resulting Debt Service

Capital Improvements Financing	2013	2014	2015	2016	2017	2018
Capital Costs to be Funded	128,750	1,750,485	1,821,212	243,860	193,212	-
less: Contributions from SDCs						
less: Contributions From Construction Fund bal						
less: Contributions From Utility Rates	128,750				193,212	-
less: Developer Contributions						
Amount to be Financed	-	1,750,485	1,821,212	243,860	-	-
Interim Borrowing:						
BANs Issued:	-	-	-	-	-	-
less: Borrowing Cost	-	-	-	-	-	-
less: Interest Payments	-	-	-	-	-	-
plus: Interest Earnings	-	-	-	-	-	-
Net Available from BANS	-	-	-	-	-	-
Long-term Borrowing:						
Revenue Bonds:						
Amount Borrowed	-	1,917,029	1,994,485	267,062	-	-
less: Financing Cost	-	19,170	19,945	2,671	-	-
less: Reserve Funding	-	147,374	153,328	20,531	-	-
less: Refunding of BANs	-	-	-	-	-	-
Net Funds from Revenue Bonds	-	1,750,485	1,821,212	243,860	-	-
General Obligation Bonds:						
Amount Borrowed	-	-	-	-	-	-
less: Financing Cost	-	-	-	-	-	-
less: Reserve Funding	-	-	-	-	-	-
less: Refunding of BANs	-	-	-	-	-	-
Net Funds from G.O. Bonds	-	-	-	-	-	-
New Annual Debt Service:						
Debt Service	-	147,374	300,702	321,233	321,233	321,233
Coverage	-	-	-	-	-	-
Reserve Funding	-	-	-	-	-	-

It should be noted, the water system financial plan also assumes the City will continue to budget $50,000 per year (adjusted for inflation) on water projects. It is assumed these project costs will be funded with cash that is generated from water rates, and is accounted for in the revenue requirements calculations. These costs are for service installations, small works construction, minor equipment and tools, and the funding for an ongoing meter replacement program. For the forecast, we have used this figure as the starting point and adjusted it for inflation (3.0% per year) over the forecast period. We have not budgeted for any costs in the other minor capital line items.

Operating Costs in Excess of Inflation – In most rate studies, there are certain operating cost categories that tend to grow in excess of the general price index. We have identified two such categories in this analysis: a) the City's pension costs, and b) health care premiums. These cost categories have been accounted for in the revenue requirements model. We have not identified any other areas of concern for this forecast, but the City should monitor the cost structure of the water utility on an ongoing basis. Three key areas of future concern are:

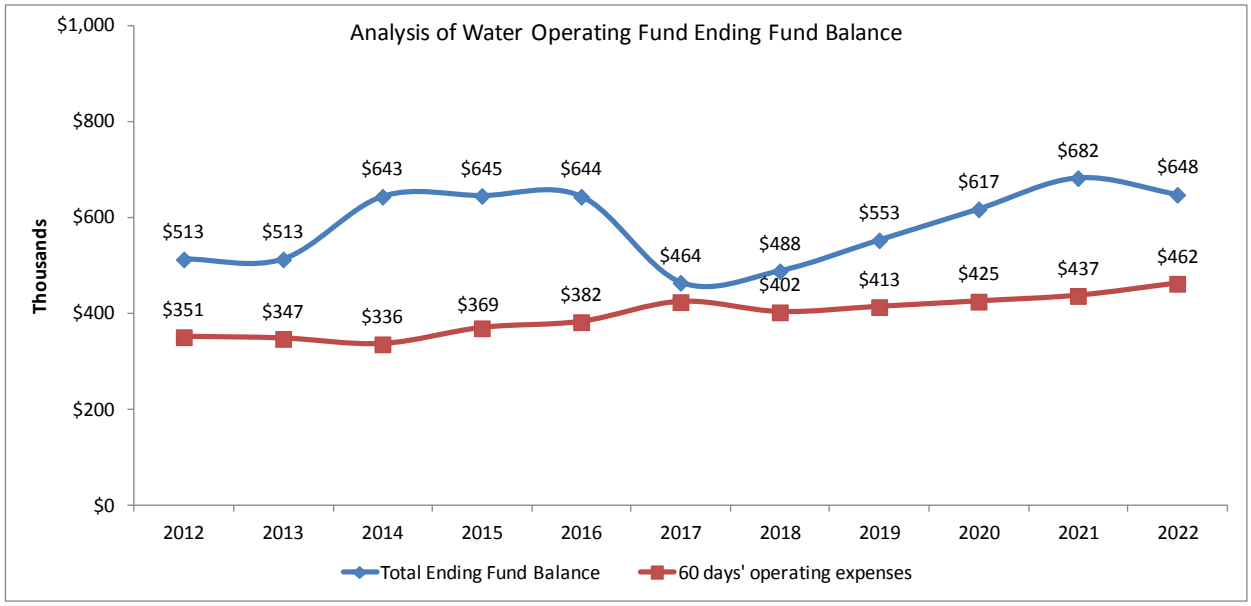
Professional services costs – The water distribution system maintenance contract with OMI is a "cost plus" contract, and has cost increase limits over the term of the contract. Within the five year forecast horizon of the current water system financial plan, this contract is due for review and renegotiation. If the future negotiations result in cost increases in excess of 3.0% per year, the City will have to revisit the water rate forecast and determine potential impacts on water rates

Administrative charges – We have not estimated or accounted for any unusual increases in City/General Fund administrative charges. The City provides administrative services such as accounting, legal, and billing to the water system. Based on proposed changes in the commodity charge rate structure as a result of our recommendations to the City Council, the City may incur additional costs for billing software updates. While modest, we do not know exactly how much these costs will be, but estimates have been included within the operations and maintenance expense forecast. The City should monitor this situation.

Staffing Costs – We have not planned or budgeted for any additional labor. If the water utility does add staff, these costs will impact the current revenue requirements forecast.

Modeling for Contingencies, Reserves, and Ending Fund Balances - The financial engine of the water utility is the water operating fund. Because the utility cash finances all of its operations, the ending fund balance in the water operating fund is in effect the contingency fund for the utility. Over the past three years, the ending fund balance in the Water Operating Fund has been declining, primarily due to several years of higher than normal operating expenses. For planning purposes, we are expecting that the Water Operating Fund will end all forecast years with a target ending fund balance in excess of sixty days of operating expenses. This target balance gives the water utility enough contingency to fund unforeseen operating cost spikes. The ten year forecast of targeted Water Operating Fund balances and operating reserve requirements is shown below in Figure 1.

Figure 1 - Forecast of Water Operating Fund Balances and Operating Reserve Requirements



Revenue Requirements Forecast & Results

All of the above cost elements are contained in the revenue requirements model which is the platform for the "base case" forecast. The base case assumes the utility will fund the projects in the 2013 Water System Capital Improvement Plan (discussed above). Also, the utility would fund the operating costs as adjusted for inflation. This base case resulted in the following forecast of water system revenue requirements (Table 5).

Table 5 – Base Case Forecast of Water System Revenue Requirements

Dallas Water Financial Forecast Model
Projection of Water System Revenue Requirements

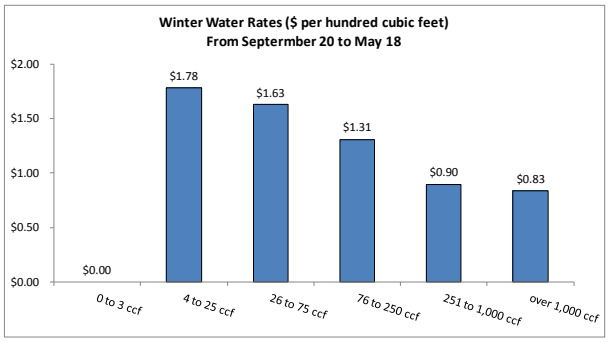
	Budget	Forecast				
	2013	2014	2015	2016	2017	2018
Projection of Cash Flow:						
Revenues:						
Total licenses and permits	5,000	5,150	5,305	5,464	5,628	5,796
Total Service Charges	2,057,500	2,057,500	2,126,483	2,198,943	2,271,963	2,346,926
Total interest earned	13,000	4,102	5,147	5,162	5,148	3,713
Total other financing sources	-	-	-	-	-	-
Total miscellaneous income	36,224	37,311	38,430	39,583	40,770	41,994
Subtotal gross operating revenues	2,111,724	2,104,063	2,175,365	2,249,152	2,323,509	2,398,429
Operations & Maintenance Expense:						
Total personal services	407,000	426,960	448,139	470,623	494,504	519,883
Total materials and services	1,091,500	1,124,245	1,157,972	1,192,712	1,228,493	1,265,348
Total debt service	523,192	495,341	648,669	669,201	669,200	669,200
Total capital outlay	50,000	51,500	53,045	54,636	56,275	57,964
Transfers(excluding transfers to the construction and bond funds)	-	-	-	-	-	-
Total operations and maintenance expense	2,071,692	2,098,046	2,307,825	2,387,171	2,448,472	2,512,394
(Use)/replacement of fund balance	40,032	75,000	(60,000)	(65,000)	(50,000)	(40,000)
Net Cash	-	(68,983)	(72,460)	(73,020)	(74,963)	(73,965)
Net Deficiency/(Surplus)	-	68,983	72,460	73,020	74,963	73,965
Test of Coverage Requirement:						
Gross Revenues:						
Operating revenues	2,111,724	2,104,063	2,175,365	2,249,152	2,323,509	2,398,429
System Development Charges	60,000	60,300	60,602	60,905	61,209	61,515
Total Gross Revenues	2,171,724	2,164,363	2,235,966	2,310,056	2,384,718	2,459,944
Operating Expenses:						
Total personal services	407,000	426,960	448,139	470,623	494,504	519,883
Total materials and services	1,091,500	1,124,245	1,157,972	1,192,712	1,228,493	1,265,348
Debt service on loans	523,192	347,967	347,967	347,968	347,967	347,967
Transfers(excluding transfers to the construction and bond funds)	-	-	-	-	-	-
Transfers to/from the rate stabilization account	-	-	(60,000)	(65,000)	(50,000)	(40,000)
Total Operating Expenses	2,021,692	1,899,172	1,894,078	1,946,302	2,020,964	2,093,198
Net Revenues	150,032	265,191	341,888	363,754	363,754	366,746
Debt Service:						
Debt Service on Existing Refunding Bonds	-	-	-	-	-	-
Debt Service on New Serial Revenue Bond Debt	-	147,374	300,702	321,233	321,233	321,233
Total debt service	-	147,374	300,702	321,233	321,233	321,233
Coverage Recognized	N/A	1.80	1.14	1.13	1.13	1.14
Coverage Required	1.25	1.25	1.25	1.25	1.25	1.25
Net Deficiency/(Surplus)	N/A	(80,974)	33,989	37,787	37,787	34,795
Projection of Revenue Sufficiency and Forecasted Rates:						
Maximum Deficiency	-	68,983	72,460	73,020	74,963	73,965
Percent Increase Required Over Current Rate Revenues	**0.00%**	**3.35%**	**3.41%**	**3.32%**	**3.30%**	**3.15%**
Five Year Average Increase in Revenue Requirements		**3.31%**	**3.31%**	**3.31%**	**3.31%**	**3.31%**
Revenues Recovered From Existing Rates and Charges:	2,057,500	2,057,500	2,126,483	2,198,943	2,271,963	2,346,926
add: Revenues Recovered From Rate Increase	-	68,983	72,460	73,020	74,963	73,965
Total Revenues Recovered From Rates & Charges after Increase	2,057,500	2,126,483	2,198,943	2,271,963	2,346,926	2,420,892

Table 5 shows, forecasted annual changes in water system revenue requirements are in line with general inflation assumptions and average approximately 3.31% per year from fiscal 2014 through fiscal 2018.

Existing Water Rates and URAC Recommended Policy Changes

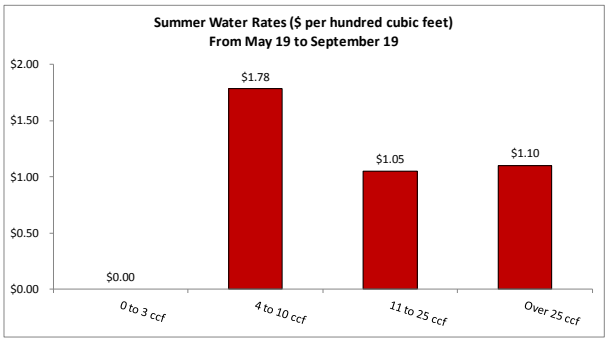
For at least the past ten (10) years, the City has used a "split season-declining block" structure for water rates. The current schedule of water rates is shown graphically:

Winter Water Rates - $/Ccf



- First 3 ccf included in the monthly base fee
- Winter period is from September 20 to May 18
- Most customers consume less than 25 Ccf per month in the winter

Summer Water Rates - $/Ccf



- Summer, 2012 consumption frequency distn.:

Usage Blocks (ccf)		% by Block
Block	Number of Bills	
Zero to 3	919	10%
4 to 10	2,613	28%
11 to 25	3,541	38%
Over 26	2,168	23%
	9,241	100%

In winter (September 20th to May 18th), all customers pay usage fees on a sliding scale ranging from $1.78 to $0.83 per hundred cubic feet (ccf) depending on their respective consumption. The City does include 3 ccf as an allowance included in the base charge. In the winter period, there are five (5) distinct water usage pricing blocks. An analysis of City billing records for calendar 2012 indicates that during the winter period, roughly 90% of all customers consumed water in the 4 to 25 ccf pricing block. Even though there are five distinct and declining pricing blocks for the winter period, almost all of the consumption occurred in the highest priced first (4 – 25 ccf) block.

The summer season (May 19th to September 19th) paints a different picture. The pricing for summer water is different than the pricing for winter water. In summer, water is priced in only three blocks ranging from $1.78 per ccf for the first block, to $1.05 per ccf for the second block, and $1.10 per ccf for the third block. City billing record for the summer of 2012 show a majority of customers (i.e., 61%) had monthly water consumption in the last two "discounted" pricing blocks.

This summer 2012 consumption history was shared with City staff and the members of the URAC and there was considerable discussion concerning the policy of having declining block water rates. In their February and March, 2013 meetings, the members of the URAC directed City staff to develop a table of the pros and cons of the current declining block water rate structure. The results are shown below in Table 6.

Table 6 - URAC Pros and Cons of the Current Declining Block Water Rate Structure

Pros	Cons
• Customers are used to it	• Does not promote conservation
• Promotes water sales in the summer	• Exacerbates peak day and peak month demand factors
• Encourages green turf and home gardens	• Compels the City to invest more in the water system to meet peak demands
	• Low consumption customers subsidize high consumption customers
	• Puts environmental pressure on the City's water shed

After a thorough discussion of the pros and cons of the current water rate structure, the URAC agreed that the negative policy implications of the declining block rate structure outweighed the benefits. The URAC spent considerable time analyzing and discussing the merits of this rate policy and is recommending the City move away from this rate structure. The specific URAC recommendations to the Council for an alternative water rate structure are:

- Eliminate the current split season, declining block water rate structure
- Continue to have a monthly base fee that does not vary by meter size
- Replace the split season, declining block commodity rates with a uniform average commodity rate that remains constant across the entire range of water consumption.
- Establish differentiated uniform commodity rates for residential and commercial customer classes. These differentiated commodity rates are based on each class's respective contribution to peak day demand. The estimated commodity rates for FY14 are:
    - ❖ Residential - $1.7262 per ccf
    - ❖ Commercial - $1.3387 per ccf
- Establish a policy on the development of industrial water rates that is flexible and will allow the City to attract and retain an industrial customer base

The URAC alternative became the base case for the water rate analysis. The ratemaking methodology that was used is called the "base-extra capacity method", and is consistent with industry standards in water rate making. Under this methodology, costs of service are separated into three primary cost components: (1) base costs, (2) extra capacity costs, and, (3)customer costs.

Base costs are those that tend to vary with the total quantity of water used plus those operations and maintenance (O&M) expenses and capital costs associated with service to customers under average load conditions, without the elements of cost incurred to meet water use variations and resulting peaks in

demand. Base costs include O&M expenses of supply, treatment, pumping, and distribution facilities. Base costs also include capital costs related to water plant investment associated with serving customers to the extent required for a constant, or average, annual rate of demand/usage.

Extra capacity costs are those associated with meeting rate of use requirements in excess of average and include O&M expenses and capital costs for system capacity beyond that required for average rate of use. These costs have been subdivided into costs necessary to meet maximum-day extra demand, and maximum-hour demand in excess of maximum day demand.

Customer costs comprise those costs associated with serving customers, irrespective of the amount or rate of water use. They include meter reading, billing, and customer accounting and collection expense, as well as maintenance and capital costs related to meters and services.

The resulting cost of service-based forecast of URAC recommended water rates is shown below in Table 7. The complete contents of the water rate model is contained in Appendix A to this report.

Table 7 - Five Year Forecast of URAC Recommended Water Rates

City of Dallas, Oregn
Water System Rate Study Update 2012
Proposed Schedule of Water Rates

Line Item Description	Budget 2013	Forecast 2014	2015	2016	2017	2018
Inside City:						
Base charge (monthly)	$ 15.7536	$ 16.1377	$ 16.5438	$ 16.9241	$ 17.2987	$ 17.6202
Use (commodity) charge						
Residential						
Base	1.0022	1.0352	1.0697	1.1057	1.1432	1.1825
Extra capacity - maximum day	0.5624	0.5803	0.5989	0.6183	0.6385	0.6596
Extra capacity - maximum hour	0.1080	0.1107	0.1135	0.1163	0.1192	0.1222
Total	1.6726	1.7262	1.7820	1.8403	1.9009	1.9643
Commercial/Industrial:						
Base	1.0022	1.0352	1.0697	1.1057	1.1432	1.1825
Extra capacity - maximum day	0.2218	0.2288	0.2362	0.2438	0.2518	0.2601
Extra capacity - maximum hour	0.0728	0.0746	0.0765	0.0784	0.0803	0.0823
Total	1.2967	1.3387	1.3823	1.4279	1.4754	1.5249
Wholesale:						
Base	N/A	N/A	N/A	N/A	N/A	N/A
Extra capacity - maximum day	N/A	N/A	N/A	N/A	N/A	N/A
Extra capacity - maximum hour	N/A	N/A	N/A	N/A	N/A	N/A
Total	-	-	-	-	-	-
Outside City:						
Base charge (monthly)	$ 31.51	$ 32.28	$ 33.09	$ 33.85	$ 34.60	$ 35.24
Use (commodity) charge						
Residential:						
Base	1.5032	1.5528	1.6045	1.6585	1.7149	1.7738
Extra capacity - maximum day	0.8436	0.8704	0.8983	0.9274	0.9578	0.9894
Extra capacity - maximum hour	0.1621	0.1661	0.1702	0.1745	0.1788	0.1832
Total	2.5088	2.5893	2.6731	2.7604	2.8514	2.9464
Commercial/Industrial:						
Base	1.5032	1.5528	1.6045	1.6585	1.7149	1.7738
Extra capacity - maximum day	0.3327	0.3433	0.3543	0.3658	0.3777	0.3902
Extra capacity - maximum hour	0.1092	0.1119	0.1147	0.1176	0.1205	0.1235
Total	1.9451	2.0080	2.0735	2.1418	2.2131	2.2874

Drought and Conservation Based Rates

A key objective for this project was to develop an alternative water rate structure that promotes dramatic reductions in water use during drought conditions. The first step in developing this alternative rate structure was to determine which classes of customers drive peak water demand in the City. The consultant team compiled historical water consumption data for all water accounts. This historical consumption data was downloaded from City billing records. Based on this data, it was determined that 84% of all water sold in the full calendar year 2011 originated from the residential customer class. The balance of water sales came from the commercial customer class (4%), and City facilities usage (parks, aquatic center, etc.) at 12%. This clearly shows the residential class is driving average and peak water demand in the City.

The second step was to standardize the City's peak demand and compare that standardized demand statistic to other western Oregon communities. In the municipal water industry, the standard frame of reference to quantify peak demand is the peaking factor. This factor is the ratio of maximum month daily demand to average annual daily demand. For all of calendar 2011, the Dallas peaking factor was calculated as follows:

Maximum month (August, 2011) daily demand ..... 4,717 ccf
Average annual daily demand ..... 2,212 ccf
Max month daily demand ÷ Ave annual daily demand 2.1327

The comparison of Dallas' 2011 peaking factor to other western Oregon communities is shown below in Figure 2.

Figure 2 - Dallas Peaking Factor Compared to Other Western Oregon Communities

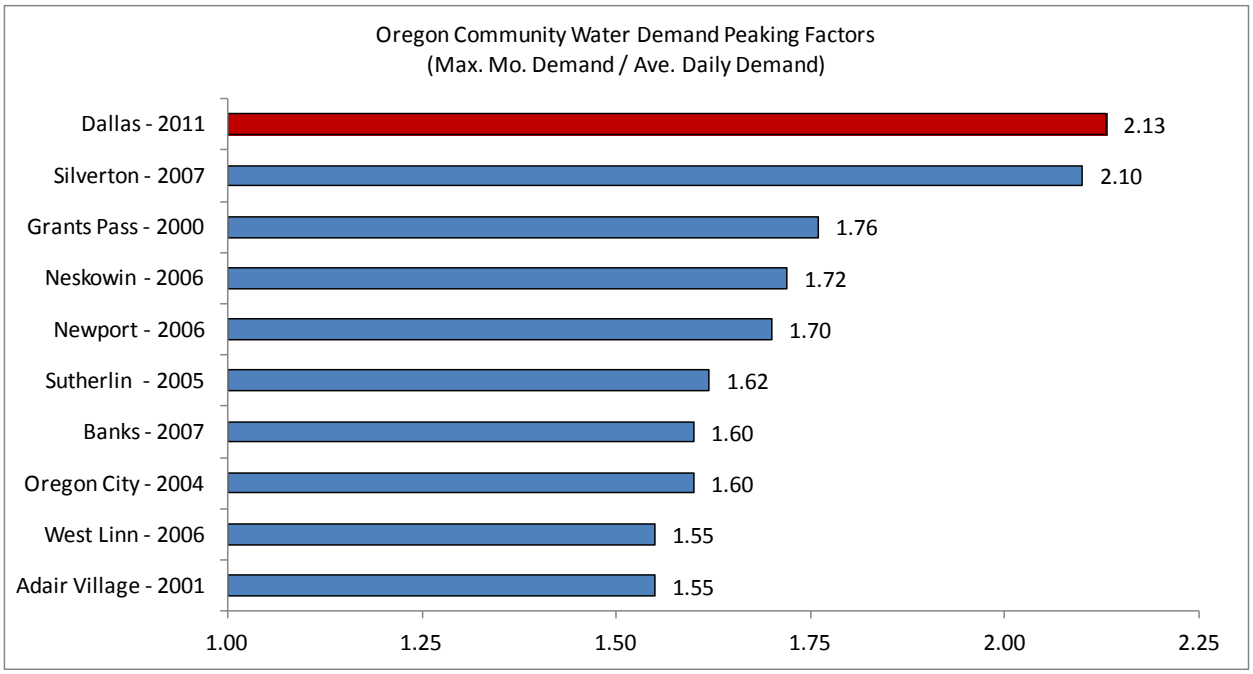


Figure 2 shows, Silverton and Dallas have relatively high peak demand factors relative to other western Oregon communities. Interestingly, both Silverton and Dallas have declining block water rate structures in the summer.

Closer inspection of the historical consumption patterns of the residential customer class corroborated the assumption that residential customers are the principal cause of seasonal water peaking demand. Based on this data, the average residential customer consumed 13.15 ccf per month on an annualized basis. During the summer months of June to September, this monthly average consumption increased to 18.82 ccf per month.

As discussed previously, the City's current summer water rate structure consists of declining block prices. Under this rate structure, customers are offered water at lower prices as they use water more during the peak summer irrigation season. City staff and the URAC directed the consultant team to investigate the feasibility of implementing a new pricing structure for the commodity charge that would give customers an economic incentive to conserve rather than use more water during the peak summer demand period. The preferred approach was to create an inverted block pricing structure for the commodity charge. Generally, an inverted block rate structure is the most widely accepted and effective water conservation rate structure in use throughout the country. Rates increase as consumption increases. The first step in the development of an inverted block rate structure is to design the pricing blocks based on a "revenue neutral" financial forecast. To achieve this goal, a model was developed to replicate the water sales conditions that were in place for calendar 2011 for all customers.

The consultant team created four rate blocks for the residential class based on the observed standard deviation of residential water consumption during the summer of 2011. The statistical derivation of the rate blocks is shown below in Table 8.

Table 8 - Derivation of Water Conservation Rate Tiers based on Summer, 2011 Consumption Data

Consumption Blocks Based on Observed Sample Standard Deviation			
Mean	18.82		
Standard Deviation*	19.10		
Median	14.00		
	Usage Blocks (ccf)		% by Block
	Block	Number of Bills	
	Zero to 3	919	10%
	4 to 19	5,095	55%
	20to 38	2,309	25%
	39 to 57	596	6%
	Over 58	322	4%
Total		9,241	100%
Checksum		9,241	
Checksum error		0	

❖ In statistics and probability theory, standard deviation shows how much variation or "dispersion" exists from the average (mean, or expected value). A low standard deviation indicates that the data points tend to be very close to the mean, whereas high standard deviation indicates that the data points are spread out over a large range of values.

As Table 8 shows, roughly 65% of all residential customers consumed 19 ccf or less per month during the summer of 2011. Conversely, 35% of the remaining residential customers consumed 20 ccf or more per

month over the same period. To encourage water conservation to those customers consuming over 20 ccf per month, pricing premiums were applied as follows:

20 ccf to 38 ccf (25% of customers in the Summer of 2011) ..... 10% more than the base block

39 ccf to 57 ccf (6% of customers in the Summer of 2011) ..... 20% more than the base block

Over 58 ccf (4% of customers in the Summer of 2011) ..... 30% more than the base block

The final step in the development of the alternative conservation water rate structure was to revisit the strategy for calculating the monthly customer base charge. Under the City's current rate structure, all customers regardless of the size of the water meter that is in place to serve the customer are charged a uniform $15.75 per month base fee. Keeping in mind, 94% of all Dallas water customers are served by either a ⅝" x ¾" or ¾" x ¾" water meter, an alternative to this approach would be to increase the monthly base fee based on the throughput capacity of the meter in place to serve customers. Using the ¾" meter as the standard, and knowing the engineered capacities of all meters in service (expressed in gallon per minute flow rates), a flow factor equivalence could be assigned to larger meters, and bill according. By increasing the monthly base fee to larger meters, it could give an incentive to existing customers to migrate down to smaller meters. The flow factor equivalence calculations for varying meter sizes is shown below in Table 9.

Table 9 - Calculation of Flow Factors for Water Meters

Meter Size:	AWWA Flow Rate Cont. Op. GPM	Flow Factor
5/8" x 3/4"	10	1.00
3/4" x 3/4"	15	1.00
1 inch	25	1.67
1 & 1/2 inch	50	3.33
2 inch	80	5.33
3 inch	175	11.67
4 inch	300	20.00
6 inch	625	41.67
8 inch	900	60.00

The rate effect of increasing monthly customer base fees by meter size and the implementation of increasing block commodity charges are shown in Table 10.

Table 10 - Schedule of Conservation-Based Water Rates

	2013	2014	2015	2016	2017	2018
Inside City:						
Base charge (monthly)						
Meter Size:						
5/8" x 3/4"	$ 15.75	$ 16.14	$ 16.54	$ 16.92	$ 17.30	$ 17.62
3/4" x 3/4"	15.75	16.14	16.54	16.92	17.30	17.62
1 inch	26.25	26.90	27.57	28.20	28.83	29.37
1 & 1/2 inch	52.50	53.80	55.13	56.40	57.67	58.73
2 inch	84.00	86.08	88.21	90.24	92.27	93.97
3 inch	183.75	188.30	192.97	197.40	201.83	205.57
4 inch	315.00	322.80	330.80	338.40	346.00	352.40
Use Charge ($/Ccf)						
Residential and Multifamily						
Zero to 300 cubic feet	-	-	-	-	-	-
400 cubic feet to1,900 cubic feet	1.67	1.73	1.78	1.84	1.90	1.96
2,000 cubic feet to 3,800 cubic feet	1.84	1.90	1.96	2.02	2.09	2.16
3,900 cubic feet to 5,700 cubic feet	2.01	2.07	2.14	2.21	2.28	2.36
Over 5,700 cubic feet	2.17	2.24	2.32	2.39	2.47	2.55
Commercial/Industrial						
Zero to 300 cubic feet	-	-	-	-	-	-
400 cubic feet to 50,000 cubic feet	1.30	1.34	1.38	1.43	1.48	1.52
Over 50,000 cubic feet	1.43	1.47	1.52	1.57	1.62	1.68
Outside City:						
Base charge (monthly)						
Meter Size:						
5/8" x 3/4"	31.50	32.28	33.08	33.84	34.60	35.24
3/4" x 3/4"	31.50	32.28	33.08	33.84	34.60	35.24
1 inch	52.50	53.80	55.13	56.40	57.67	58.73
1 & 1/2 inch	105.00	107.60	110.27	112.80	115.33	117.47
2 inch	168.00	172.16	176.43	180.48	184.53	187.95
3 inch	367.50	376.60	385.93	394.80	403.67	411.13
4 inch	630.00	645.60	661.60	676.80	692.00	704.80
Use Charge ($/Ccf)						
Residential and Multifamily						
Zero to 300 cubic feet	-	-	-	-	-	-
400 cubic feet to 2,300 cubic feet	2.51	2.59	2.67	2.76	2.85	2.95
2,400 cubic feet to 4,300 cubic feet	2.76	2.85	2.94	3.04	3.14	3.24
4,400 cubic feet to 6,300 cubic feet	3.01	3.11	3.21	3.31	3.42	3.54
Over 6,400 cubic fee	3.26	3.37	3.47	3.59	3.71	3.83
Commercial/Industrial						
Zero to 300 cubic feet	-	-	-	-	-	-
400 cubic feet to 50,000 cubic feet	1.95	2.01	2.07	2.14	2.21	2.29
Over 50,000 cubic feet	2.14	2.21	2.28	2.36	2.43	2.52

Wastewater Rates

Analysis of Wastewater System Revenue Requirements

For the current budget year (fiscal 2013), it is forecast that the wastewater utility will generate sufficient revenues from rates, charges and fees to meet its obligations and produce an unappropriated ending balance in the Wastewater Operating Fund of $1,705,232. The beginning balance for this same fiscal year was $1,769,578. In order to establish and maintain cash balances in the Wastewater Operating Fund while continuing to pay for future capital requirements, a general water rate increase of 2.84% in fiscal 2014 is required. Based on discussions with the City Staff, this general rate increase should be implemented on June 1, 2013.

For the forecast of revenue requirements, the following assumptions were made based on discussions with City staff and the URAC:

Inflation in costs and growth in the customer base – Per guidance from City staff, the following factors were applied for estimating future cost escalation; the same factors that were used in the water system revenue requirements analysis:

- All direct labor line items – 3.0% per year
- Pension plan contributions (City cost) – 5.0% per year
- Health insurance premiums (City cost) – 8.0% per year
- Professional services (OMI contract) – 3.0% per year
- All other operating expense line items – 3.0% per year
- The growth forecast expressed in the annual increase in 3.4" meters is estimated to be 0.50% per year over the five (5) year forecast horizon.

Capital Improvement Plan Funding - In the current fiscal year, total wastewater system capital improvement costs are estimated to be $103,000. This money is to be spent on the City's federally mandated "Capacity, Management, Operation, and Maintenance Program" (CMOM). This program also includes infiltration & inflow abatement (I&I) and fats, oils, and grease (FOG) abatement. The current budget assumes these capital improvement costs will be funded from cash on hand.

Between fiscal 2014 and 2016, the City's Wastewater System Capital Improvement Plan calls for the investment of $3,083,304; spread roughly evenly at $1 million in each of the three forecast years. The wastewater system financial plan calls for the fiscal 2014 costs to be funded from cash on hand, and the fiscal 2015 and 2016 costs to be funded from the proceeds of future revenue bonds (one bond in each future fiscal year). The resulting debt service on these bonds is to be paid from wastewater rates. The key planning assumptions concerning the issuance of these future wastewater system revenue bonds are:

- Life of each issuance – 20 years
- Interest rate – 4.50%
- Issuance costs – 1.0% of gross borrowings
- Coverage requirement – 1.05 times annual debt service (based on the requirements of the Clean Water State Revolving Loan program administered by the Oregon DEQ)
- Reserve requirement – one year's annual debt service

Under the current wastewater system financial plan, by the end of fiscal 2016, the City will add an additional $181,878 of annual revenue bond debt service to the wastewater system revenue requirements. The debt sizing cash flows and resulting debt service calculations are shown below in Table 11.

Table 11 - Forecast of Future Wastewater System Borrowings and Resulting Debt Service

Capital Improvements Financing	2013	2014	2015	2016	2017	2018
Capital Costs to be Funded	103,000	922,983	1,147,363	1,012,958	-	-
less: Contributions from SDCs						
less: Contributions From Construction Fund bal						
less: Contributions From Utility Rates	103,000	922,983				
less: Developer Contributions						
Amount to be Financed	-	-	1,147,363	1,012,958	-	-
Interim Borrowing:						
BANs Issued:	-	-	-	-	-	-
less: Borrowing Cost	-	-	-	-	-	-
less: Interest Payments	-	-	-	-	-	-
plus: Interest Earnings	-	-	-	-	-	-
Net Available from BANS	-	-	-	-	-	-
Long-term Borrowing:						
Revenue Bonds:						
Amount Borrowed	-	-	1,256,525	1,109,332	-	-
less: Financing Cost	-	-	12,565	11,093	-	-
less: Reserve Funding	-	-	96,597	85,281	-	-
less: Refunding of BANs	-	-	-	-	-	-
Net Funds from Revenue Bonds	-	-	1,147,363	1,012,958	-	-
General Obligation Bonds:						
Amount Borrowed	-	-	-	-	-	-
less: Financing Cost	-	-	-	-	-	-
less: Reserve Funding	-	-	-	-	-	-
less: Refunding of BANs	-	-	-	-	-	-
Net Funds from G.O. Bonds	-	-	-	-	-	-
New Annual Debt Service:						
Debt Service	-	-	96,597	181,878	181,878	181,878
Coverage	-	-	-	-	-	-
Reserve Funding	-	-	-	-	-	-

It should be noted, the wastewater system financial plan also assumes the City will continue to budget $105,000 per year (adjusted for inflation) on wastewater projects. It is assumed these project costs will be funded with cash that is generated from wastewater rates, and is accounted for in the revenue requirements calculations. These costs are for wastewater line replacements, emergency response, small works construction, minor equipment and tools, and wastewater treatment plant equipment. For the forecast, we have used this figure for our starting point and adjusted it for inflation (3.0% per year) over the forecast period. We have not budgeted for any costs in the other minor capital line items.

Operating Costs in Excess of Inflation – In most rate studies, there are certain operating cost categories that tend to grow in excess of the general price index. We have identified two such categories affecting the City's pension costs and health care premiums. These cost categories have been accounted for in the revenue requirements model. We have not identified any other areas of concern for this forecast, but the City should monitor the cost structure of the water utility on an ongoing basis. Three key areas of future concern are:

Professional services costs – The wastewater system maintenance contract with OMI is a "cost plus" contract, and has cost increase limits over the term of the contract. The annual cost of the contract

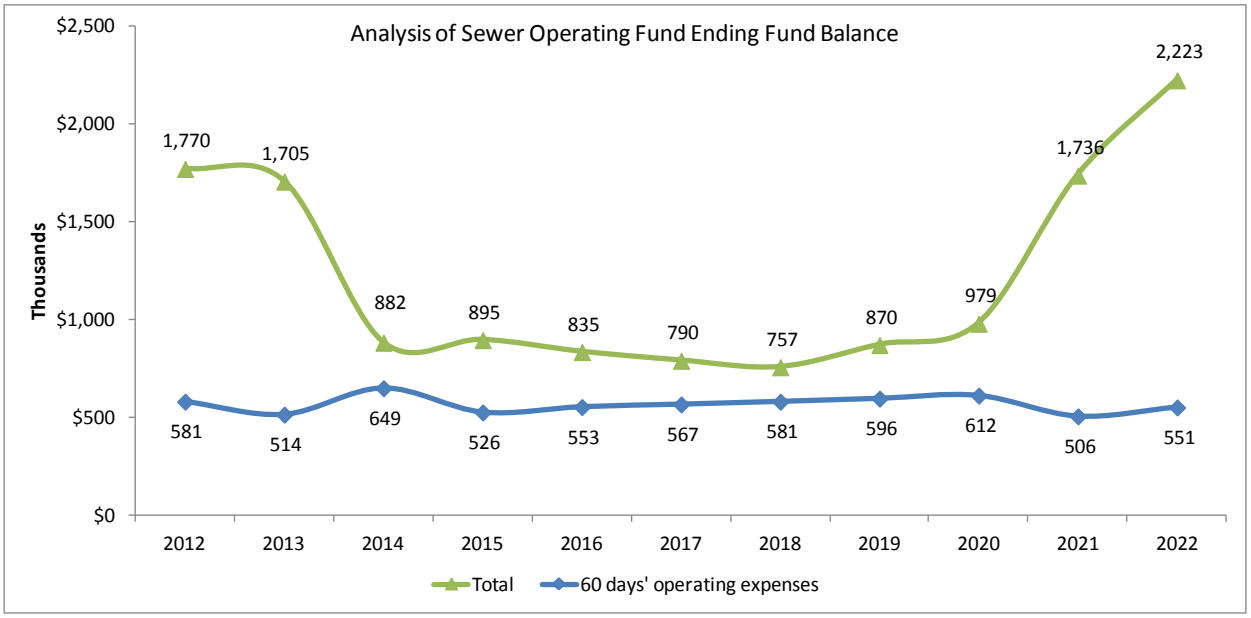
is the single highest line item cost in the wastewater department's budget (i.e., $700,000 for fiscal 2013). Within the five year forecast horizon of the current wastewater system financial plan, this contract is due for review and renegotiation. If the future negotiations result in cost increases in excess of 3.0% per year, the City will have to revisit the wastewater rate forecast, and determine the resulting higher wastewater rate implications

Administrative charges – We have not estimated or accounted for any unusual increases in City/general fund administrative charges. The City provides administrative services such as accounting, legal, and billing to the wastewater system. The City should monitor this situation for developments.

Staffing Costs – We have not planned or budgeted for any additional labor. If the wastewater utility does add staff, these costs will impact the current revenue requirements forecast.

Modeling for Contingencies, Reserves, and Ending Fund Balances – As discussed above, the Wastewater Operating Fund is expected to end this fiscal year with an unappropriated ending fund balance of $1,705,232; ample cash for an operating reserve. For planning purposes, we are expecting the Wastewater Operating Fund will end all forecast years with an ending fund balance well in excess of sixty days of operating expenses. This target balance gives the wastewater utility enough contingency to fund unforeseen operating cost spikes. The ten year forecast of targeted wastewater operating fund balances and operating reserve requirements is shown below in Figure 3. There is a significant increase in Wastewater Operating Fund balance starting in fiscal 2021. This is due to the planned retirement of the Series 2011 Full Faith and Credit Sewer System Refunding Obligations in fiscal 2020.

Figure 3 - Forecast of Sewer Operating Fund Balances and Operating Reserve Requirements



Revenue Requirements Forecast & Results

All of the above cost elements are contained in the revenue requirements model and from this, the "base case" forecast was developed. The base case assumes the utility would fund the projected capital

costs contained in the 2013 Wastewater System Capital Improvement Plan (discussed above). Also, the utility would fund the operating costs as adjusted for inflation. This base case resulted in the following forecast of water system revenue requirements (Table 12).

Table 12 – Base Case Forecast of Wastewater System Revenue Requirements

Dallas Wastewater Financial Forecast Model
Projection of Sewer System Revenue Requirements

	Budget	Forecast				
	2013	2014	2015	2016	2017	2018
Projection of Cash Flow:						
Revenues:						
Total licenses and permits	-	-	-	-	-	-
Total Service Charges	2,975,000	2,975,000	3,059,548	3,148,381	3,239,940	3,335,670
Total interest earned	25,000	13,642	7,058	7,164	6,676	6,320
Total other financing sources	12,450	-	-	-	-	-
Total miscellaneous income	53,000	54,590	56,228	57,915	59,652	61,442
Subtotal gross operating revenues	3,065,450	3,043,232	3,122,834	3,213,459	3,306,268	3,403,432
Operations & Maintenance Expense:						
Total personal services	587,500	616,475	647,227	679,883	714,577	751,456
Total materials and services	1,503,500	1,548,605	1,595,063	1,642,915	1,692,202	1,742,969
Total debt service	1,005,650	1,004,550	1,094,747	1,178,428	1,171,528	1,165,878
Total capital outlay	105,000	108,150	111,395	114,736	118,178	121,724
Transfers(excluding transfers to the sewer bond fund)	-	-	-	-	-	-
Total operations and maintenance expense	3,201,650	3,277,780	3,448,432	3,615,962	3,696,486	3,782,026
(Use)/replacement of fund balance	(136,200)	(150,000)	(250,000)	(325,000)	(325,000)	(300,000)
Net Cash	-	(84,548)	(75,598)	(77,503)	(65,218)	(78,594)
Net Deficiency/(Surplus)	-	84,548	75,598	77,503	65,218	78,594
Test of Coverage Requirement:						
Gross Revenues:						
Operating revenues	3,065,450	3,043,232	3,122,834	3,213,459	3,306,268	3,403,432
System Development Charges	20,000	20,100	20,201	20,302	20,403	20,505
Total Gross Revenues	3,085,450	3,063,332	3,143,034	3,233,761	3,326,671	3,423,937
Operating Expenses:						
Total personal services	587,500	616,475	647,227	679,883	714,577	751,456
Total materials and services	1,503,500	1,548,605	1,595,063	1,642,915	1,692,202	1,742,969
Debt service on full faith and credit refunding obligations	1,005,650	1,004,550	998,150	996,550	989,650	984,000
Transfers to/from the rate stabilization account	-	-	(110,000)	(185,000)	(165,000)	(150,000)
Total Operating Expenses	3,096,650	3,169,630	3,130,440	3,134,348	3,231,429	3,328,424
Net Revenues	(11,200)	(106,298)	12,594	99,413	95,242	95,513
Debt Service:						
Debt Service on Existing Bonds and Loans	-	-	-	-	-	-
Debt Service on New Serial Revenue Bond Debt	-	-	96,597	181,878	181,878	181,878
Total debt service	-	-	96,597	181,878	181,878	181,878
Coverage Recognized	N/A	N/A	0.13	0.55	0.52	0.53
Coverage Required	1.05	1.05	1.05	1.05	1.05	1.05
Net Deficiency/(Surplus)	-	-	88,833	91,559	95,730	95,459
Projection of Revenue Sufficiency and Forecasted Rates:						
Maximum Deficiency	-	84,548	88,833	91,559	95,730	95,459
Percent Increase Required Over Current Rate Revenues	**0.00%**	**2.84%**	**2.90%**	**2.91%**	**2.95%**	**2.86%**
Five Year Average Increase in Revenue Requirements		**2.89%**	**2.89%**	**2.89%**	**2.89%**	**2.89%**
Revenues Recovered From Existing Rates and Charges:	2,975,000	2,975,000	3,059,548	3,148,381	3,239,940	3,335,670
add: Revenues Recovered From Rate Increase	-	84,548	88,833	91,559	95,730	95,459
Total Revenues Recovered From Rates & Charges after Increase	2,975,000	3,059,548	3,148,381	3,239,940	3,335,670	3,431,129

Table 12 shows forecasted annual changes in wastewater system revenue requirements are in line with general inflation assumptions and average approximately 2.89% per year from fiscal 2014 through fiscal 2018.

Existing Wastewater Rates and URAC Recommended Policy Changes

The City charges its wastewater customers for collection and treatment services as follows:

- ***Single family residential*** - $40.91 per account per month flat
- ***Multiple dwelling units*** - $40.91 per month for the first dwelling unit, and $30.21 per month for each additional dwelling unit
- ***Non-housekeeping or transient quarters*** - $41.91 per month plus $10.50 per month for each additional bedroom or sleeping quarters
- ***Commercial Users*** - as defined in Resolution No. 3147
    - ✓ Section 1 (d) – Commercial User. Based upon the monthly average metered delivery of water to said premises for the highest three months of usage during November, December, January, and February just previous, the following rate and charges shall apply

Consumption Block	Rate	% increase by Block
0 - 3 ccf	$ 40.91	
3 - 15 ccf	$ 69.19	69%
15 - 25 ccf	$ 90.90	31%
25 - 50 ccf	$ 140.47	55%
50 - 75 ccf	$ 187.00	33%
75 - 100 ccf	$ 230.37	23%
100 - 200 ccf	$ 366.75	59%
> 200 ccf	$366.75, plus $1.41 per ccf over 200 ccf	

The City's flat monthly rate structure for residential customers has been in place for in excess of ten years, and works well for the City and its customers. In calendar 2011, active residential accounts accounted for 93% of all active accounts and 88% of total wastewater system revenues. As in the case of the water system analysis, the residential class drives the demands on the City's wastewater system.

In calendar 2011, the commercial customer class accounted for 7% of active accounts, and 12% of total wastewater system revenues. The City currently does not serve any industrial high sewage strength customers. The current methodology for billing commercial and large multi-family wastewater customers does not follow the industry norm. Allowing these customers to be billed based on their individual prior winter month's average water consumption is unusual. That methodological billing approach is usually reserved for residential customers in a "consumption-based" billing model. Since commercial and large multi-family wastewater customers generally do not have summer irrigation needs, there is no reason to limit their wastewater bills to winter average monthly water consumption. This was brought to the attention of the URAC, and they are recommending to the City Council that large multi-family and commercial customers be billed on "real time" monthly water consumption.

Modification to Commercial and Industrial Wastewater Rate Categories

A deliverable for this project was to develop an alternative wastewater rate structure that accounted for high strength sewage discharge. Specifically, the study was tasked to provide at least two alternatives for commercial wastewater rates based upon high biochemical oxygen demand (BOD) or total

suspended solids (TSS). The project team spent considerable time on this issue with City staff and developed a proposal that was presented to the URAC at their regular meetings in January and February of 2013. That proposal consisted of establishing three distinct classes of commercial wastewater customers, and one class for high strength industrial customers. Since wastewater does not get measured or chemically analyzed when it leaves a customer's property, strength of discharge limits had to be established for each new commercial class. The strength limits proposed for the new classes are (expressed in units of biochemical oxygen demand (BOD) and units of total suspended solids (TSS):

New Customer Class Name	BOD	TSS
Residential Class Characteristics:		
Single family residential – domestic strength wastewater	200 mg/liter	200 mg/liter
Multi-family residential – domestic strength wastewater	200 mg/liter	200 mg/liter
Commercial Industrial Class Characteristics:		
Commercial Class I – domestic strength wastewater	200 mg/liter	200 mg/liter
Commercial Class II – medium strength wastewater	250 mg/liter	250 mg/liter
Commercial Class III – high strength wastewater	300 mg/liter	300 mg/liter
Industrial extra strength – industrial wastewater	over 350 mg/liter	over 350 mg/liter

The strength of discharge limits became the driver for developing the proposed schedule of wastewater rates that was presented to the URAC and subsequently adopted for recommendation to the City Council. That recommended schedule of wastewater rates is shown below in Table 13. The complete contents of the wastewater rate model are contained in Appendix B to this report.

Table 13 - Proposed Schedule of Wastewater Rates

City of Dallas, Oregon
Wastewater Rate Study Update - 2013
Schedule of Current and Recommended Wastewater Rates

Line Item Description	Budget 2013	Forecast 2014	2015	2016	2017	2018
Consumption Based Rates:						
Customer Account Service (BASE) Charges:						
Inside City monthly	$ 34.61247	$ 35.39017	$ 37.84435	$ 39.29063	$ 39.85826	$ 40.39729
Commodity (USE) Charges:						
Single Family Residential						
Sanitary flow and I&I	0.62796	0.64488	0.53544	0.50640	0.54923	0.59307
Strength - BOD	0.13557	0.13927	0.11153	0.10377	0.11387	0.12421
Strength - TSS	0.13550	0.13919	0.11147	0.10371	0.11381	0.12414
Total - $/Ccf	$ 0.89904	$ 0.92334	$ 0.75845	$ 0.71388	$ 0.77691	$ 0.84141
Multi-Family						
Sanitary flow and I&I	0.62796	0.64488	0.53544	0.50640	0.54923	0.59307
Strength - BOD	0.13557	0.13927	0.11153	0.10377	0.11387	0.12421
Strength - TSS	0.13550	0.13919	0.11147	0.10371	0.11381	0.12414
Total - $/Ccf	$ 0.89904	$ 0.92334	$ 0.75845	$ 0.71388	$ 0.77691	$ 0.84141
Commercial I						
Sanitary flow and I&I	0.62796	0.64488	0.53544	0.50640	0.54923	0.59307
Strength - BOD	0.13557	0.13927	0.11153	0.10377	0.11387	0.12421
Strength - TSS	0.13550	0.13919	0.11147	0.10371	0.11381	0.12414
Total - $/Ccf	$ 0.89904	$ 0.92334	$ 0.75845	$ 0.71388	$ 0.77691	$ 0.84141
Commercial II						
Sanitary flow and I&I	0.62796	0.64488	0.53544	0.50640	0.54923	0.59307
Strength - BOD	0.16947	0.17409	0.13941	0.12971	0.14234	0.15526
Strength - TSS	0.16938	0.17399	0.13934	0.12964	0.14226	0.15517
Total - $/Ccf	$ 0.96680	$ 0.99296	$ 0.81420	$ 0.76575	$ 0.83383	$ 0.90350
Commercial III						
Sanitary flow and I&I	0.62796	0.64488	0.53544	0.50640	0.54923	0.59307
Strength - BOD	0.20336	0.20890	0.15565	0.15565	0.17080	0.18631
Strength - TSS	0.20325	0.20879	0.15557	0.15557	0.17071	0.18621
Total - $/Ccf	$ 1.03457	$ 1.06258	$ 0.84667	$ 0.81762	$ 0.89075	$ 0.96558
High Strength						
Sanitary flow and I&I - $/Ccf	0.62796	0.64488	0.53544	0.50640	0.54923	0.59307
BOD - $/lb	0.23725	0.24372	0.19518	0.18160	0.19927	0.21736
TSS - $/lb	0.23713	0.24359	0.19507	0.18150	0.19916	0.21724
Total - $/Ccf	$ 1.10234	$ 1.13219	$ 0.92570	$ 0.86949	$ 0.94767	$ 1.02767
Flat Monthly Rates:						
Single Family Residential flat rate:						
Winter average monthly consumption (ccf)	7.00	7.00	7.00	7.00	7.00	7.00
BASE charge	$ 34.61	$ 35.39	$ 37.84	$ 39.29	$ 39.86	$ 40.40
USE charge	6.29	6.46	5.31	5.00	5.44	5.89
Total - $/account/month	$ 40.91	$ 41.85	$ 43.15	$ 44.29	$ 45.30	$ 46.29

Note: High strength customers that contribute wastewater that exceed a strength threshold of 350 mg/l BOD or 350 mg/l TSS will be charged based on their actual flow and load.

User classifications shall be comprised of, but not limited to the following:

A. Residential.

1. Single-family (per dwelling unit);
2. Multiple-family (per dwelling unit);
3. Mobile home park (per dwelling space);
4. Travel trailer park (per dwelling space).
5. Hotels and motels (each)

B. Commercial I.

1. Barbershops and beauty shops (each);
2. Car dealers and automotive repair facilities (each);
3. Churches (each, without garbage disposal);
4. Department stores (each);
5. Fraternal clubs (each, without food service);
6. Grocery stores (each, without meat cutting);
7. Hardware stores (each);
8. Laundromats (each);
9. Light industrial (each, based on City Engineer's review);
10. Medical, dental and veterinary clinics (each);
11. Pharmacies (each);
12. Print shops (each);
13. Professional offices (each business);
14. Schools (each, without food preparation);
15. Service stations (each);
16. Taverns (each, without food preparation);
17. Warehouses (each).
18. Carwashes (each)
19. Government Utilities (each)
20. Nursery (each)

C. Commercial II.

1. Churches (each, with garbage disposal);
2. Restaurants and fraternal clubs (each, with food service, no garbage disposal, with grease trap);
3. Institutions (each, hospitals, schools, nursing homes).

D. Commercial III.

1. Bakeries (each);
2. Restaurants and fraternal clubs (each, with food service, no garbage disposal, without grease trap);
3. Grocery stores (each, with meat cutting and/or bakery);
4. Meat markets (each).

E. Industrial.

1. Any facility that discharges effluent to the sanitary sewer for any 24-hour period which equals or exceeds any one of the following criteria:
    a. Flow greater than 25,000 gpd,
    b. BOD greater than 350 mg/l,
    c. SS greater than 350 mg/l,
    d. pH greater than 9.0,
    e. pH less than 6.0.

Stormwater Management

Existing Conditions and Funding Sources

The City is responsible for the management of the surface waters that flow over and through its jurisdictional boundaries. The existing drainage facilities within the City outfall to several natural creeks, but the primary drainage is Rickreall Creek. In undeveloped areas, open system conveyance to one of these creek systems is common, while in the more intensively developed areas, piped systems are the norm. The costs the City incurs to manage stormwater are principally funded from wastewater rates, with some contributions from stormwater SDCs for capital improvements. There is no dedicated funding source for stormwater operations at this time.

City staff estimate that approximately 6% of its total wastewater operating fund budget is spent on stormwater maintenance & system cleaning (i.e., $175k). The consultant team estimated for a community the size of Dallas, a stormwater program budget should be in the $300k - $700k range and this would assume a minimal capital improvement program. Unfortunately, the City does not have a current stormwater master plan, and the fiscal 2013 budget actually calls for a reduction in stormwater system maintenance and cleaning. After considerable discussion with City staff and the URAC, it is suggested the City commission a new stormwater master plan, and once completed, revisit the subject of establishing a dedicated rate and revenue stream (stormwater utility). Development of the master plan would provide the City with a better understanding of its stormwater system, maintenance requirements, future capital needs/costs and the impact of federal stormwater regulations on Dallas into the future.

URAC Recommendation to the City Council

The current condition of the stormwater program was presented to the URAC at their January and February, 2013 meetings, and consensus was reached that stormwater costs will continue to increase and will occupy a growing proportion of the wastewater rate over time. URAC members felt the appropriate future policy for stormwater funding would be a dedicated, fee-based, funding source for the program, and to establish an enterprise fund to budget and account for stormwater finances. However, before any action is considered for the creation of a standalone stormwater utility, the City should commission a new stormwater master plan to guide future planning for the program.

System Development Charges

Introduction

The City's current schedule of SDCs for water and stormwater was last reviewed in 2003. The wastewater SDC was last updated in 1999. With the preparation of the utilities rate study, the City also updated its methodologies for water, wastewater, and stormwater SDCs. As part of this review and update, the City has stated a number of objectives:

- Review the basis for water, wastewater, and stormwater SDCs to ensure a consistent methodology;
- Address specific policy, administrative, and technical issues which had arisen from application of the existing SDCs;
- Determine the most appropriate and defensible fees, ensuring that development is paying its proportionate share of capital costs;
- Consider possible revisions to the structure or basis of the charges which might improve equity or proportionality to demand;
- Provide clear, orderly documentation of the assumptions, methodology, and results, so that City staff could, by reference, respond to questions or concerns from the public.

This report provides the documentation of that effort, and was done in close coordination with City staff relying on available capital facility plans and other relevant documents. Table 14 summarizes the current and proposed residential equivalent SDCs for water wastewater, and stormwater. Appendix C includes the calculations used to derive the proposed SDCs for each service.

Table 14 - Component Breakdown of the Proposed Residential Equivalent Water, Wastewater, and Stormwater SDCs

	Reimbursement	Improvement	Total
Proposed:			
Water	1,154	2,973	4,127
Wastewater	1,495	3,792	5,287
Stormwater	9	1,066	1,075
Total proposed	$ 2,658	$ 7,831	$ 10,489
Current:			
Water	-	3,752	3,752
Wastewater	-	3,834	3,834
Stormwater	-	812	812
Total current	$ -	$ 8,398	$ 8,398
Difference:			
Water	1,154	(779)	375
Wastewater	1,495	(42)	1,453
Stormwater	9	254	263
Difference	$ 2,658	$ (567)	$ 2,091

The framework for SDC calculation is established by Oregon Revised Statute (ORS) 223.297-297.314 which is the basis for this review. Under statute, SDC's are one-time capital fees imposed on new development and have two components: reimbursement and improvement.

The reimbursement fee considers the cost of existing facilities, prior contributions by existing users of those facilities, the value of the unused/available capacity, and generally accepted ratemaking principles. The objective is "future system users contribute no more than an equitable share to the cost of existing facilities." The reimbursement fee can be spent on capital costs or debt service related to the systems for which the SDC is applied.

The improvement fee portion of the SDC is based on the cost of planned future facilities that expand the system's capacity to accommodate growth or increase its level of performance. In developing an analysis of the improvement portion of the fee for water, wastewater, and stormwater, each project in the respective service's capital improvement plan is evaluated to exclude costs related to correcting existing system deficiencies or upgrading for historical lack of capacity. An example is a facility which improves system capacity to better serve current customers. The costs for this type of project must be eliminated from the improvement fee calculation. Only capacity increasing/level of performance costs provide the basis for the SDC calculation. The improvement SDC is calculated as a function of the estimated number of additional equivalent residential units to be served by the City's facilities over the planning period.

SDC Legal Authorization

SDCs are authorized by Oregon Revised Statute (ORS) 223.297-314. The statute is specific in its definition of SDCs, their application, and their accounting. In general, an SDC is a one-time fee imposed on new development or redevelopment, and assessed at the time of development approval or increased usage of the system. SB 939, passed by the 2003 legislature, included many procedural adjustments and clarifications to ORS 223. Overall, the statute is intended to promote equity between new and existing customers by recovering a proportionate share of the cost of existing and planned/future capital facilities that serve the developing property. Statute further provides the framework for the development and imposition of SDCs and establishes that SDC receipts may only be used for capital improvements and/or related debt service.

The methodology used to determine the improvement fee portion of the SDC must consider the cost of projected capital improvements needed to increase system capacity or level of performance. In other words, the cost of planned projects that correct existing deficiencies or do not otherwise increase capacity would not be SDC eligible. The improvement fee must also provide a credit for construction of a qualified public improvement.

SDC Methodology

The essential ingredient in the development of an SDC methodology for water, wastewater, and stormwater services is source data. For this project, the consultant team has relied on a number of data sources. The primary sources have been the adopted master plans and plan updates for the three municipal facilities. We have supplemented these data sources with City utility billing records, certified 2010 census data, and other documents that we deemed helpful, accurate, and relevant to this study. Table 15 contains a bibliography of the key documents/sources that we relied upon to build the analysis and resulting SDCs.

Table 15 - Data Sources for the Calculation of Water, Wastewater, and Stormwater SDC

Service	Master Plan Document and/or Corroborating Source Documentation
Water	• City of Dallas Water Capital Improvement Plan; January, 2013 • City of Dallas Utility Billing System - water meters in service report; February 21, 2012 • Per American Water Works Association standards effective January 1, 2003 for cold water meters- displacement type, bronze main case. ANSI approval October 11, 2002. American Water Works Association ANSI/AWWA C700-02 (Revision of ANSI/AWWA C700-95). • Portland State University, College of Urban Affairs, Population Research Center; Certified 2010 census for Dallas, Oregon; March 31, 2011
Wastewater	• City of Dallas Wastewater Capital Improvement Plan; January, 2013 • City of Dallas Utility Billing System – water meters in service report; February, 2012 • Portland State University, College of Urban Affairs, Population Research Center; Certified 2010 census for Dallas, Oregon; March 31, 2011
Stormwater	• City of Dallas Stormwater Capital Improvement Plan; January, 2013 • Portland State University, College of Urban Affairs, Population Research Center; Certified 2010 census for Dallas, Oregon; March 31, 2011

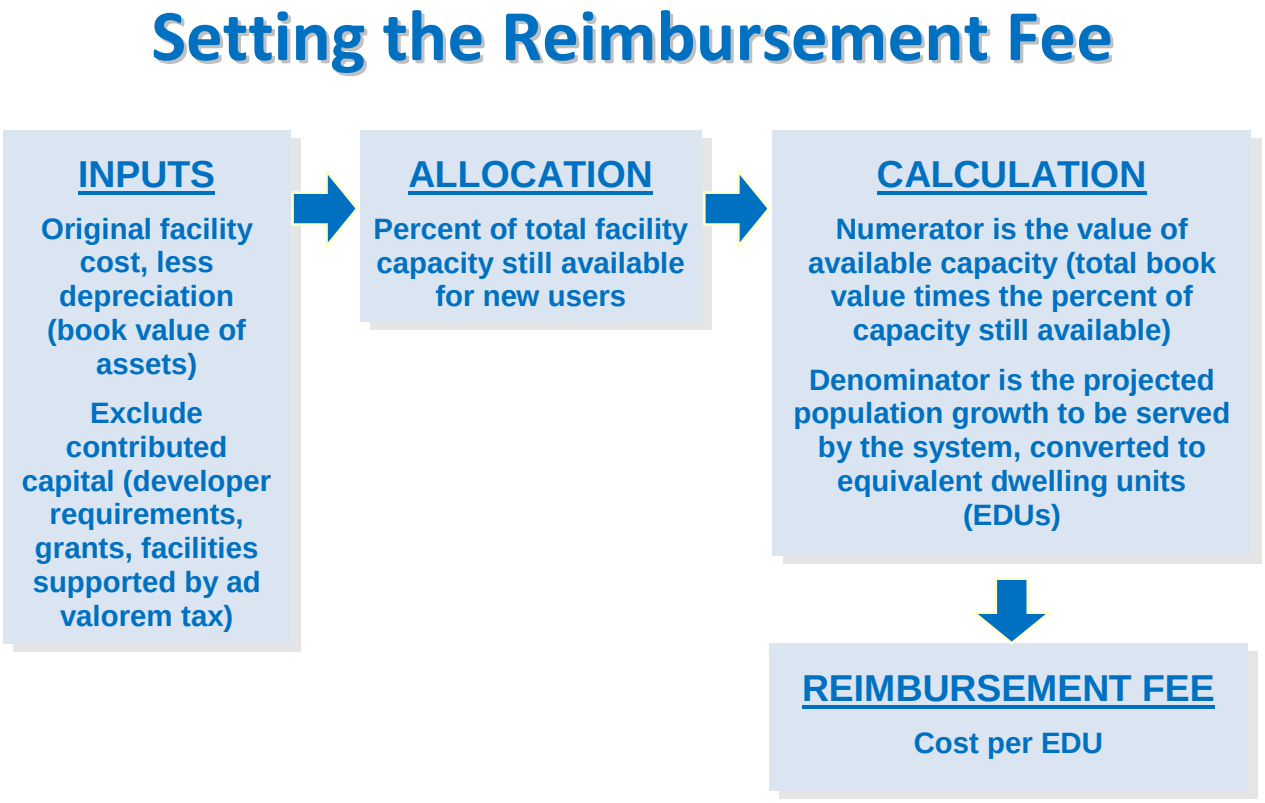
Reimbursement Fee Methodology

The reimbursement fee represents a buy-in to the cost, or value, of infrastructure capacity within the existing system. Generally, if a system was adequately sized for future growth, the reimbursement fee might be the only charge imposed, since the new customer would be buying existing capacity. However, staged system expansion is needed, and an improvement fee is imposed to allocate those growth related costs. Even in those cases, the new customer also relies on capacity within the existing system, and a reimbursement component is warranted.

In order to determine an equitable reimbursement fee to be used in conjunction with an improvement fee, two points should be highlighted. First, the cost of the system to the City's customers may be far less than the total plant-in-service value. This is due to the fact that elements of the existing system may have been contributed, whether from developers, governmental grants, and other sources. Therefore, the net investment by the customer/owners is less. Second, the value of the existing system to a new customer is less than the value to an existing customer, since the new customer must also pay, through an improvement fee, for expansion of some portions of the system.

The method used for determining the reimbursement fee accounts for both of these points. First, the charge is based on the net investment in the system, rather than the gross cost. Therefore, donated facilities, typically including distribution (water) and collection (wastewater) lines, local facilities, and grant-funded facilities, would be excluded from the cost basis. Also, the charge should be based on investments clearly made by the current users of the system, and not already supported by new

customers. Tax supported activities fail this test since funding sources have historically been from general revenues, or from revenues which emanate, at least in part, from the properties now developing. Second, the cost basis is allocated between used and unused capacity, or capacity available to serve growth. In the absence of a detailed asset by asset analysis, it is appropriate to allocate the cost of existing facilities between used and available capacity proportionally based on the forecasted population growth as converted to residential equivalents over the planning period. This approach reflects the philosophy, consistent with the City's Updated Master Plans, that facilities have been sized to meet the demands of the customer base within the established planning period.



Improvement Fee Methodology

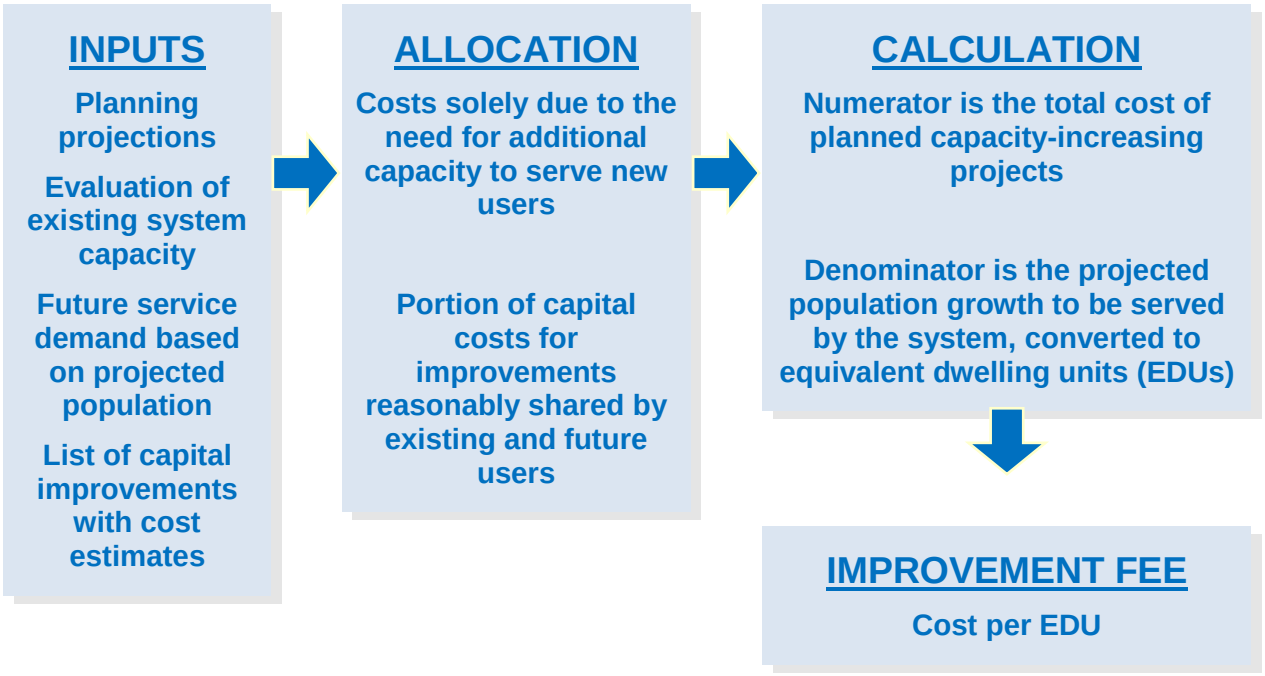
There are three basic approaches used to develop improvement fee SDCs: "standards driven", "improvements-driven", and "combination/hybrid" approaches. The "standards-driven" approach is based on the application of Level of Service (LOS) standards for facilities. Facility needs are determined by applying the LOS standards to projected future demand, as applicable. SDC-eligible amounts are calculated based on the costs of facilities needed to serve growth. This approach works best where level of service standards have been adopted but no specific list of projects is available. The "improvements-driven" approach is based on a specific list of planned capacity increasing capital improvements. The portion of each project that is attributable to growth is determined, and the SDC-eligible costs are calculated by dividing the total costs of growth-required projects by the projected increase in projected future demand, as applicable. This approach works best where a detailed master plan or project list is available and the benefits of projects can be readily apportioned between growth and current users. Finally, the combination/hybrid-approach includes elements of both the "improvements driven" and "standards-driven" approaches. Level of Service standards may be used to create a list of planned capacity-increasing projects, and the growth required portions of projects are then used as the basis for determining SDC eligible costs. This approach works best where levels of service have been identified and the benefits of individual projects are not easily apportioned between growth and current users.

In the past, the City has utilized the "improvements-driven" approach for the calculation of water, wastewater, and stormwater SDCs. This study continues to use this method, and has relied on the capital improvement plans that are incorporated in the master plans, and plan updates for these three municipal services.

For this SDC methodology update, the improvement fee represents a proportionate share of the cost to expand the systems to accommodate growth. This charge is based on the capital improvement plans established by the City in the master plans for water, wastewater, and park services. The costs that can be applied to the improvement fees are those that can reasonably be allocable to growth. Statute requires that the capital improvements used as a basis for the charge be part of an adopted capital improvement schedule, whether as part of a system plan or independently developed, and that the improvements included for SDC eligibility be capacity or level of service expanding. The improvement fee is intended to protect existing customers from the cost burden and impact of expanding a system that is already adequate for their own needs in the absence of growth.

The key step in determining the improvement fee is identifying capital improvement projects that expand the system and the share of those projects attributable to growth. Some projects may be entirely attributable to growth, such as a wastewater collection line that exclusively serves a newly developing area. Other projects, however, are of mixed purpose, in that they may expand capacity, but they also improve service or correct a deficiency for existing customers. An example might be a water booster pump station that both expands water distribution system capacity and corrects a chronic capacity issue for existing users. In this case, a rational allocation basis must be defined.

Setting the Improvement Fee



The improvement portion of the SDC is based on the proportional approach toward capacity and cost allocation in that only those facilities (or portions of facilities) that either expand the water, wastewater and stormwater system capacity to accommodate growth or increase its respective level of performance have been included in the cost basis of the fee. As part of this SDC update, City Staff were asked to review the planned capital improvement lists in order to assess SDC eligibility. The criteria in Figure 4 were developed to guide the City's evaluation:

Figure 4 - SDC Eligibility Criteria

City of Dallas

Steps Toward Evaluating

Capital Improvement Lists for SDC Eligibility

ORS 223

1. Capital improvements mean the facilities or assets used for :
    a. Water supply, treatment, storage, transmission, and distribution
    b. Wastewater collection, transmission, treatment, and disposal
    c. Stormwater land acquisition, and improvements

    This definition DOES NOT ALLOW costs for operation or routine maintenance of the improvements;
2. The SDC improvement base shall consider the cost of projected capital improvements needed to increase the capacity of the systems to which the fee is related;
3. An increase in system capacity is established if a capital improvement increases the "level of performance or service" provided by existing facilities or provides new facilities.

Under the City' approach, the following rules will be followed

1. Repair costs are not to be included;
2. Replacement costs will not be included unless the replacement includes an upsizing of system capacity and/or the level of performance of the facility is increased;
3. New regulatory compliance facility requirements fall under the level of performance definition and should be proportionately included;
4. Costs will not be included which bring deficient systems up to established design levels.

In developing the improvement fee, the project team in consultation with City staff evaluated each of its CIP projects to exclude costs related to correcting existing system deficiencies or upgrading for historical lack of capacity. Only capacity increasing/level of performance costs were used as the basis for the SDC calculation, as reflected in the capital improvement schedules developed by the City. The improvement fee is calculated as a function of the estimated number of projected additional residential equivalents for water, wastewater and stormwater to be served by the City's facilities over the planning horizon.

Once the future costs to serve growth have been segregated (i.e., the numerator), they can be divided into the total number of new residential equivalents that will use the capacity derived from those investments (i.e., the denominator).

Methodology for the Granting of Credits, Exemptions, Discounts, and Indexing

SDC Credits Policy

ORS 223.304 requires that credits be allowed for the construction of a "qualified public improvements" which are required as a condition of development approval, identified in the capital plan, located on or contiguous to property that is the subject of development approval or located on or contiguous to such property and is required to be built larger or with greater capacity than is necessary for the particular development project. The credit for a qualified public improvement may only be applied against an SDC for the same type of improvement, and may be granted only for the cost of that portion of an improvement which exceeds the minimum standard facility size or capacity needed to serve the particular project. For multi-phase projects, any excess credit may be applied against SDCs that accrue in subsequent phases of the original development project. In addition to these required credits, the City may, if it so chooses, provide a greater credit, establish a system providing for the transferability of credits, provide a credit for a capital improvement not identified in the Capital Improvement Plan, or provide a share of the cost of an improvement by other means.

The City has adopted a policy for granting SDC credits, and has codified this policy in the Dallas City Code (DCC) §4.655. The adopted SDC credit policy consists of six (6) items as follows:

(1) As used in this section and in the definition of "qualified public improvements" in section 4.620, the word "contiguous" means that part of a public way which abuts the development parcel.

(2) When development occurs that must pay an SDC under section4.630, the SDC for the existing use which would have been imposed if this section was in effect when the property was developed shall be calculated and if it is less than the SDC for the proposed use, the difference between the SDC for the existing use and the SDC for the proposed use shall be the SDC required under section 4.630. If the change in use results in the SDC for the proposed use being less than the SDC for the existing use, no SDC shall be required; however, no refund or credit shall be given.

(3) The limitations on the use of credits contained in this subsection shall not apply when credits are otherwise given under section4.655. A credit shall be given for the cost of a qualified public improvement associated with a development. If a qualified public improvement is located partially on and partially off the parcel of land that is the subject of the approval, the credit shall be given only for the cost of the portion of the improvement not located on or wholly contiguous to the parcel of land. The credit provided for by this subsection shall be only of the improvement fee charged for the type of improvement being constructed and shall not exceed the improvement fee even if the cost of the capital improvement exceeds the applicable improvement fee.

(4) Applying the methodology adopted by resolution, the city manager may grant a credit against the improvement fee for a capital improvement constructed as part of the development that reduces the development's demand upon existing capital improvements or the need for future capital improvements or that would otherwise have to be constructed at city expense under then-existing council policies.

(5) In situations where the amount of credit exceeds the amount of the SDC, the excess credit is not transferable to another development. However, the excess credit may be transferred to another phase of the original development.

(6) Credit shall not be transferrable from one type of capital improvement to another.

[Section 4.655 added by Ordinance No. 1450, passed June 17, 1991.]

Partial and Full SDC Exemptions Policy

The City may exempt certain types of development, from the requirement to pay SDCs. Exemptions reduce SDC revenues and, therefore, increase the amounts that must come from other sources, such as utility rates. As in the case of SDC credits, the City has articulated a policy relative to partial and full SDC exemption. This SDC exemption policy is codified in DCC §4.650, and is as follows:

The following are exempt from the SDC imposed in section 4.630:

(1) Development which existed on July 1, 1991 and for which a building or placement permit was issued before that date.

(2) An alteration, addition, replacement or change in use that does not increase the use of capital improvements.

(3) Development exempt under the provisions of DCC §9.850 (Enterprise Zone Development).

[Section 4.650 amended by Ordinance No. 1450, passed June 17, 1991.]

SDC Discount Policy

The City, at its sole discretion may discount the SDC rates by choosing not to charge a reimbursement fee for excess capacity, or by reducing the portion of growth-required improvements to be funded with SDCs. A discount in the SDC rates may also be applied on a pro-rata basis to any identified deficiencies, which must to be funded from sources other than improvement fee SDCs. The portion of growth-required costs to be funded with SDCs must be identified in the CIP. Because discounts reduce SDC revenues, they increase the amounts that must come from other sources, such as user fees or general fund contributions, in order to acquire the facilities identified in the Updated Master Plan

Policy to Adjust SDCs for Inflation

The City has a policy of reviewing its SDCs on a periodic basis. Between the review dates, the city annually applies a cost adjustment index to its SDC rates to reflect changes in costs for land and construction. The specific cost index to be used, and how the index is to be applied is as follows:

(1) Notwithstanding any other provision, the dollar amounts of the SDC set forth in the SDC methodology report shall on January 1st of each year be adjusted to account for changes in the costs of acquiring and constructing facilities. The adjustment factor shall be based on:

   a. The change in construction costs according to the Engineering News Record (ENR) Northwest (Seattle, Washington) Construction Cost Index (CCI).

   b. The system development charges adjustment factor shall be used to adjust the system development charges, unless they are otherwise adjusted by the city based on a change in the costs of materials, labor, or real property; or adoption of an updated methodology.

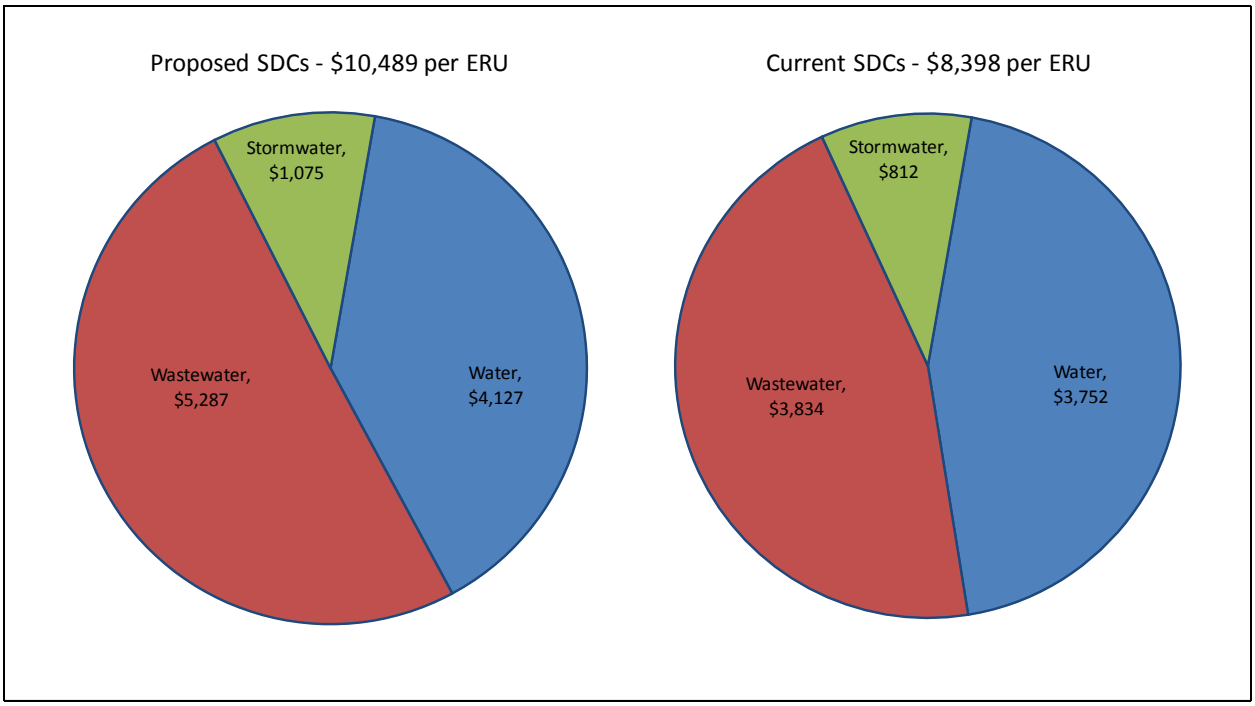
SDC Methodology Conclusions and Recommendations

The 2012 water, wastewater, and stormwater SDC methodology update was done in accordance with DCC Chapter 4, and with the benefit of adopted master plans and plan updates for the three municipal services. Our analysis indicates the City can charge a maximum of $4,127 for water, $5,287 for wastewater, and $1,075 for Stormwater. These figures are on a residential equivalent basis. The sum of these maximum

fees amounts to $10,489 per ERU; $2,091 more than the sum of the current SDCs for water, wastewater, and stormwater of $8,398.

A side by side comparison of the proposed and current schedule of water, wastewater and stormwater SDCS is shown blow in figure 5.

Figure 5 - Proposed and Current Schedule of Water, Wastewater, and Stormwater SDCs



As Figure 5 shows, there was a significant increase in the proposed wastewater SDC. When the wastewater SDC was last updated in 1999, it was assumed that the City's wastewater treatment plant was at effective full capacity, and that new users of the system would bear a preponderance of the costs to add new capacity. Since that time, the City has invested $14.5 million to upgrade facilities, and to enhance treatment processes. A significant amount of the investments in the wastewater treatment plant were made to provide future wastewater treatment capacity through 2030.

In 2008, the City invested almost $6 million to upgrade the water treatment plant capacity and provide for more finished water storage. These investments have provided additional finished water delivery capacity. The $6 million investments increased the reimbursement fee from the 2003 update of zero to the proposed value of $1,154. The improvement fee is proposed to go from the current value of $3,752 to $2,973.

The proposed stormwater SDC is $1,075, an increase of $263 from the current stormwater SDC of $812. This SDC should be updated in conjunction with the revised stormwater master plan that is currently being scheduled by the City.

Rate Study Conclusions and Recommendations

The City's utilities are well funded and managed. Over the five year near-term forecast, our modeling indicates water system revenue requirements will increase by 3.31% per year. This level of general water rate increases will be sufficient to fund projected operations and maintenance cost increases, and provide sufficient cash flows to pay increased debt service on anticipated future borrowings for water system capital improvements.

With the benefit of input from City staff and the members of the URAC we recommend the following to the City Council relative to modifications to the City's water rate structure:

- Eliminate the current split season, declining block water rate structure
- Continue to have a monthly base fee that does not vary by meter size
- Replace the split season, declining block commodity rates with a uniform average commodity rate that remains constant across the entire range of water consumption.
- Establish differentiated uniform commodity rates for residential and commercial customer classes. These differentiated commodity rates are based on each class's respective contribution to peak day demand. The estimated commodity rates for FY14 are:
    - ✓ Residential - $1.7262 per Ccf
    - ✓ Commercial - $1.3387 per Ccf
- Establish a policy on the development of industrial water rates that is flexible and will allow the City to attract and retain an industrial customer base

In the case of the wastewater system, the City appears to be in good financial shape, and our modeling indicates average annual increases in revenue requirements are projected to be 2.89% per year. The City's current wastewater rate structure conforms to industry norms, but needs some modifications for rate equity and to better facilitate the City's management of the types and strengths of discharges that enter the wastewater system. The most significant recommended changes to the current schedule of wastewater rates are:

- Move commercial and multifamily wastewater customers off of the "winter average" method of estimating flows to the wastewater system; and replace it with actual monthly metered water consumption for each respective commercial and multifamily customer.
- Modify the current single commercial customer class, and expand it to include low, medium, and high strength sub classes.
- Create a new industrial extra strength customer class

Concerning the storm and surface water management system, currently, SWM work is funded from wastewater rates and to a lesser extent from stormwater SDCs. We recommend the City start working on a dedicated funding source for stormwater work through the creation of a stormwater utility. It is likely that stormwater costs will continue to increase and will occupy a growing proportion of the wastewater rate over time. However, without a current master plan on file to guide the program, the creation of a stormwater utility at this time would be premature.

- Before any action is considered for the creation of a standalone stormwater utility, the City should first commission a new stormwater master plan

The City's SDC methodologies have not been reviewed/updated for some time (8 years for water and stormwater, and 13 years for wastewater). The project team reviewed the methodologies from scratch, and presented their findings to City staff and the URAC. We recommend the following to the Council relative to water, wastewater, and stormwater SDC methodologies:

- Change the current SDC methodology for water, wastewater, and storm to include reimbursement fees
- Update the current improvement fees to take the most current adopted capital improvement plans into account for water, wastewater, and storm
- Upon Council approval, direct City staff to comply with the statutory notice provisions contained in ORS 223.304
- Between SDC methodology updates, adjust water, wastewater, and storm SDCs for inflation based on an annual changes in the Engineering News Record's Construction Cost Index for the City of Seattle.

Neighboring Communities' Utility Rates and SDCs

Shown below in Figures 6 and 7 are charts that compare the current and proposed utility rates and SDCs for a single family customer in Dallas to the same charges in similar communities in western Oregon.

Figure 6 - Comparison of Neighboring Communities' Utility Rates

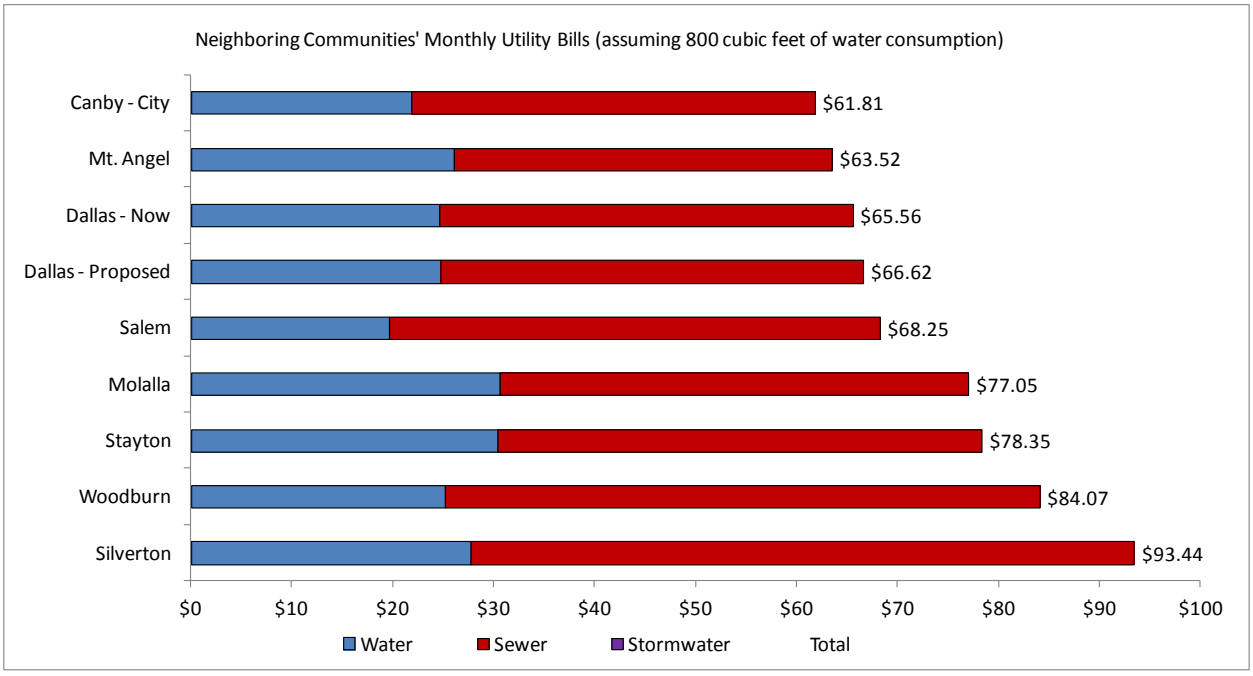
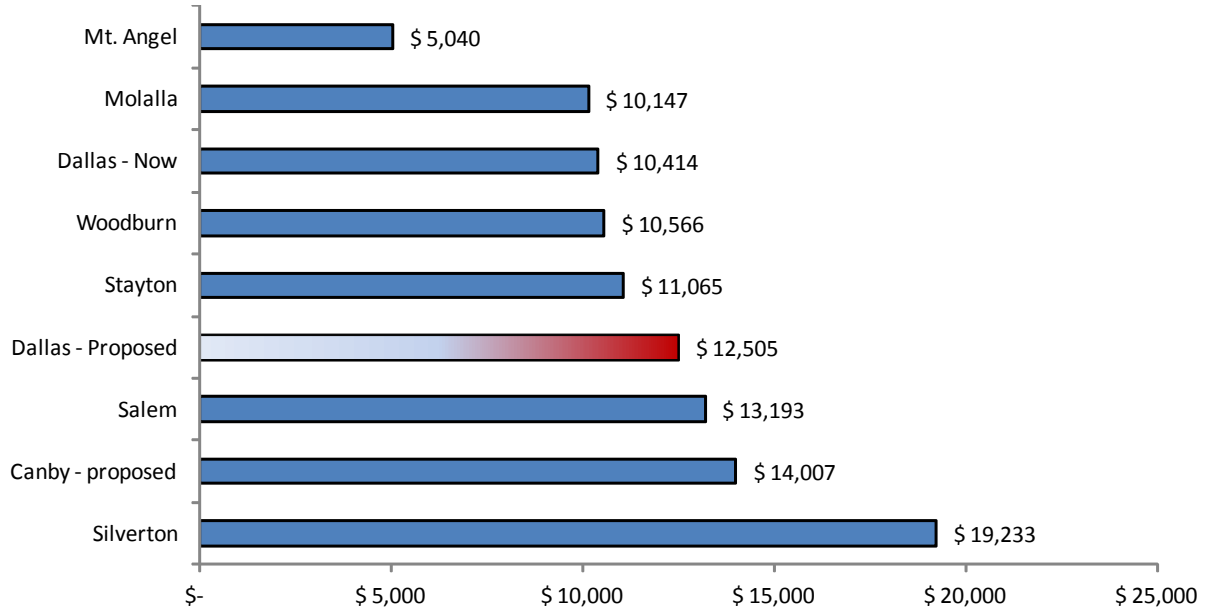


Figure 7 - Comparison of Neighboring Communities' SDCs

City of Dallas - 2013 Utilities Rate Study
Comparison of SDCs per Single-Family Detached Dwelling

Jurisdiction	Water	Sewer	Storm	Streets	Parks	Total
Silverton	4,964	4,663	2,072	3,135	4,399	$ 19,233
Canby - proposed	3,333	2,571	161	2,955	4,987	$ 14,007
Salem	3,500	3,500	494	1,954	3,745	$ 13,193
Dallas - Proposed	4,127	5,287	1,075	1,016	1,000	$ 12,505
Stayton	2,670	3,528	-	2,562	2,305	$ 11,065
Woodburn	2,085	2,977	220	3,532	1,752	$ 10,566
Dallas - Now	3,752	3,834	812	1,016	1,000	$ 10,414
Molalla	2,113	3,903	289	2,939	903	$ 10,147
Mt. Angel	2,338	1,250	96	1,301	55	$ 5,040



Appendix A – Water Rate Model Output Tables

Water Rates Step 1 - Functional Allocation of Revenue Requirements

- Functions are:
  - Source of Supply
  - T & D System
  - Customer Accounts
  - G & A
    - Debt Svc
    - OMI contract
    - Gen. Fund transfer

	2013	2014	2015	2016	2017	2018
Net Revenue Requirement by Function:						
Source of Supply						
land, buildings and impoundment	107,132	111,908	116,952	122,282	127,917	133,879
reservoir	107,132	111,908	116,952	122,282	127,917	133,879
water treatment equipment	404,635	421,401	439,040	457,608	477,165	497,775
fees, permits	-	-	-	-	-	-
laboratory testing	-	-	-	-	-	-
vehicles, tools. & misc.	-	-	-	-	-	-
source of supply total	618,900	645,217	672,944	702,171	732,999	765,533
Transmission and Distribution System						
distribution reservoirs	113,863	117,278	120,797	124,421	128,153	131,998
transmission & distribution mains	274,850	283,096	291,588	300,336	309,346	318,626
services	29,369	30,250	31,157	32,092	33,055	34,046
hydrants	24,994	25,744	26,516	27,311	28,131	28,975
fees, permits	-	-	-	-	-	-
tools, shop, and garage equipment	9,475	9,759	10,052	10,354	10,664	10,984
transmission & distribution mains total	452,550	466,127	480,110	494,514	509,349	524,629
Customer Account Expense						
meter reading and services	-	-	-	-	-	-
customer collection & services	118,750	122,313	125,982	129,761	133,654	137,664
postage, supplies	-	-	-	-	-	-
customer accounts expense total	118,750	122,313	125,982	129,761	133,654	137,664
General and Administrative Expense						
General & Administrative	820,250	844,365	869,992	894,104	917,968	938,521
office supplies	-	-	-	-	-	-
telephone	12,000	12,360	12,731	13,113	13,506	13,911
contract services	15,050	15,502	15,967	16,446	16,939	17,447
employee costs	8,000	8,240	8,487	8,742	9,004	9,274
insurance - general	12,000	12,360	12,731	13,113	13,506	13,911
long term supply development	-	-	-	-	-	-
general and administrative expense total	867,300	892,827	919,908	945,517	970,924	993,065
Total Net Revenue Requirement by Function	2,057,500	2,126,483	2,198,943	2,271,963	2,346,926	2,420,892
Checksum	2,057,500	2,126,483	2,198,943	2,271,963	2,346,926	2,420,892
Checksum error	-	-	-	-	-	-

Water Rates Step 2 – Assignment of Functional Costs to BEC

- Meters & Services and Billing costs are recovered from the monthly base charge
- Base and extra capacity charges are recovered from the volume (commodity) charge

		Variable		Fixed		
		Extra Capacity		Customer Costs		
Line Item Description	Base	Max Day	Max hour	Meters & Services	Billing	BEC Total
Forecast Year: **2013**						
Source of Supply	403,996	214,904	-	-	-	618,900
Transmission and Distribution System	246,102	137,632	68,816	-	-	452,550
Customer Account Expense	-	-	-	-	118,750	118,750
General and Administrative Expense	-	-	-	867,300	-	867,300
Total	$ 650,098	$ 352,536	$ 68,816	$ 867,300	$ 118,750	$ 2,057,500
Forecast Year: **2014**						
Source of Supply	421,408	223,809	-	-	-	645,217
Transmission and Distribution System	253,485	141,761	70,880	-	-	466,127
Customer Account Expense	-	-	-	-	122,313	122,313
General and Administrative Expense	-	-	-	892,827	-	892,827
Total	$ 674,894	$ 365,569	$ 70,880	$ 892,827	$ 122,313	$ 2,126,483
Forecast Year: **2015**						
Source of Supply	439,767	233,177	-	-	-	672,944
Transmission and Distribution System	261,090	146,014	73,007	-	-	480,110
Customer Account Expense	-	-	-	-	125,982	125,982
General and Administrative Expense	-	-	-	919,908	-	919,908
Total	$ 700,857	$ 379,190	$ 73,007	$ 919,908	$ 125,982	$ 2,198,943
Forecast Year: **2016**						
Source of Supply	459,133	243,038	-	-	-	702,171
Transmission and Distribution System	268,923	150,394	75,197	-	-	494,514
Customer Account Expense	-	-	-	-	129,761	129,761
General and Administrative Expense	-	-	-	945,517	-	945,517
Total	$ 728,056	$ 393,432	$ 75,197	$ 945,517	$ 129,761	$ 2,271,963
Forecast Year: **2017**						
Source of Supply	479,574	253,425	-	-	-	732,999
Transmission and Distribution System	276,990	154,906	77,453	-	-	509,349
Customer Account Expense	-	-	-	-	133,654	133,654
General and Administrative Expense	-	-	-	970,924	-	970,924
Total	$ 756,565	$ 408,331	$ 77,453	$ 970,924	$ 133,654	$ 2,346,926
Forecast Year: **2018**						
Source of Supply	501,162	264,371	-	-	-	765,533
Transmission and Distribution System	285,300	159,553	79,776	-	-	524,629
Customer Account Expense	-	-	-	-	137,664	137,664
General and Administrative Expense	-	-	-	993,065	-	993,065
Total	$ 786,462	$ 423,924	$ 79,776	$ 993,065	$ 137,664	$ 2,420,892

Water Rates Step 3 – Calculate Monthly Base Charge

- One size fits all approach currently used by the City

City of Dallas, Oregon
Water System Rate Study Update 2012
Calculation of Forecasted Customer Charges ($/Account/Month)

	Budget	Forecast				
	2013	2014	2015	2016	2017	2018
Net revenue requirement - customer costs						
Meters & Services	867,300	892,827	919,908	945,517	970,924	993,065
Billing	118,750	122,313	125,982	129,761	133,654	137,664
Total	986,050	1,015,139	1,045,890	1,075,278	1,104,578	1,130,729
Number of equivalent customers/bills:						
Per month	5,216	5,242	5,268	5,295	5,321	5,348
Annual	62,592	62,905	63,219	63,535	63,853	64,172
Unit charge per equivalent customer:						
Meters & Services	13.8564	14.1933	14.5510	14.8817	15.2056	15.4750
Billing	1.8972	1.9444	1.9928	2.0423	2.0932	2.1452
Total	$ 15.7536	$ 16.1377	$ 16.5438	$ 16.9241	$ 17.2987	$ 17.6202

- Alternative approach – Base fee on sliding scale based on capacity to serve

City of Dallas, Oregon
Water System Rate Study Update 2012
Calculation of Forecasted Customer Charges by Meter Size ($/Meter/Month)

	Budget	Forecast				
	2013	2014	2015	2016	2017	2018
Meter Size:						
5/8" x 3/4"	$ 15.75	$ 16.14	$ 16.54	$ 16.92	$ 17.30	$ 17.62
3/4" x 3/4"	$ 15.75	$ 16.14	$ 16.54	$ 16.92	$ 17.30	$ 17.62
1 inch	$ 26.25	$ 26.90	$ 27.57	$ 28.20	$ 28.83	$ 29.37
1 & 1/2 inch	$ 52.50	$ 53.80	$ 55.13	$ 56.40	$ 57.67	$ 58.73
2 inch	$ 84.00	$ 86.08	$ 88.21	$ 90.24	$ 92.27	$ 93.97
3 inch	$ 183.75	$ 188.30	$ 192.97	$ 197.40	$ 201.83	$ 205.57
4 inch	$ 315.00	$ 322.80	$ 330.80	$ 338.40	$ 346.00	$ 352.40
6 inch	$ 656.25	$ 672.50	$ 689.17	$ 705.00	$ 720.83	$ 734.17
8 inch	$ 945.00	$ 968.40	$ 992.40	$ 1,015.20	$ 1,038.00	$ 1,057.20

Water Rates Step 4 – Calculate Use (Commodity) Charge

- Residential commodity rates are higher than commercial:
  - Residential peaking factor = 2.17
  - Commercial peaking factor = 1.46

Line Item Description	Budget 2013	Forecast 2014	2015	2016	2017	2018
Estimated annual water sales in Ccf:						
Residential	612,662	615,725	618,804	621,898	625,007	628,132
Commercial	36,039	36,219	36,400	36,582	36,765	36,949
Wholesale	-	-	-	-	-	-
Total	648,701	651,945	655,204	658,480	661,773	665,082
Base charge:						
Forecasted base cost revenue requirement	$ 650,098	$ 674,894	$ 700,857	$ 728,056	$ 756,565	$ 786,462
Base charge:						
Residential	1.0022	1.0352	1.0697	1.1057	1.1432	1.1825
Commercial	1.0022	1.0352	1.0697	1.1057	1.1432	1.1825
Wholesale	N/A	N/A	N/A	N/A	N/A	N/A
Extra capacity charge:						
Maximum day charge:						
Forecasted maximum day revenue requirement	$ 352,536	$ 365,569	$ 379,190	$ 393,432	$ 408,331	$ 423,924
Maximum day extra capacity charge:						
Residential	0.5624	0.5803	0.5989	0.6183	0.6385	0.6596
Commercial	0.2218	0.2288	0.2362	0.2438	0.2518	0.2601
Wholesale	N/A	N/A	N/A	N/A	N/A	N/A
Maximum hour charge:						
Forecasted maximum hour revenue requirement	$ 68,816	$ 70,880	$ 73,007	$ 75,197	$ 77,453	$ 79,776
Maximum hour extra capacity charge:						
Residential	0.1080	0.1107	0.1135	0.1163	0.1192	0.1222
Commercial	0.0728	0.0746	0.0765	0.0784	0.0803	0.0823
Wholesale	N/A	N/A	N/A	N/A	N/A	N/A
Commodity charge summary:						
Residential						
Base	1.0022	1.0352	1.0697	1.1057	1.1432	1.1825
Maximum day	0.5624	0.5803	0.5989	0.6183	0.6385	0.6596
Maximum hour	0.1080	0.1107	0.1135	0.1163	0.1192	0.1222
Total	1.6726	1.7262	1.7820	1.8403	1.9009	1.9643
Commercial						
Base	1.0022	1.0352	1.0697	1.1057	1.1432	1.1825
Maximum day	0.2218	0.2288	0.2362	0.2438	0.2518	0.2601
Maximum hour	0.0728	0.0746	0.0765	0.0784	0.0803	0.0823
Total	1.2967	1.3387	1.3823	1.4279	1.4754	1.5249
Wholesale						
Base	N/A	N/A	N/A	N/A	N/A	N/A
Maximum day	N/A	N/A	N/A	N/A	N/A	N/A
Maximum hour	N/A	N/A	N/A	N/A	N/A	N/A
Total	-	-	-	-	-	-

Water Rates Step 5 – Proposed Rates Near Revenue Neutral

- Assumes first 3 Ccf are priced in the base charge
- No outer consumption blocks
- Eliminates summer discount pricing
- Creates new commercial water rate

Line Item Description	Budget 2013	Forecast 2014	2015	2016	2017	2018
Inside City:						
Base charge (monthly)	$ 15.7536	$ 16.1377	$ 16.5438	$ 16.9241	$ 17.2987	$ 17.6202
Use (commodity) charge						
Residential						
Base	1.0022	1.0352	1.0697	1.1057	1.1432	1.1825
Extra capacity - maximum day	0.5624	0.5803	0.5989	0.6183	0.6385	0.6596
Extra capacity - maximum hour	0.1080	0.1107	0.1135	0.1163	0.1192	0.1222
Total	1.6726	1.7262	1.7820	1.8403	1.9009	1.9643
Commercial/Industrial:						
Base	1.0022	1.0352	1.0697	1.1057	1.1432	1.1825
Extra capacity - maximum day	0.2218	0.2288	0.2362	0.2438	0.2518	0.2601
Extra capacity - maximum hour	0.0728	0.0746	0.0765	0.0784	0.0803	0.0823
Total	1.2967	1.3387	1.3823	1.4279	1.4754	1.5249
Wholesale:						
Base	N/A	N/A	N/A	N/A	N/A	N/A
Extra capacity - maximum day	N/A	N/A	N/A	N/A	N/A	N/A
Extra capacity - maximum hour	N/A	N/A	N/A	N/A	N/A	N/A
Total	-	-	-	-	-	-
Outside City:						
Base charge (monthly)	$ 31.51	$ 32.28	$ 33.09	$ 33.85	$ 34.60	$ 35.24
Use (commodity) charge						
Residential:						
Base	1.5032	1.5528	1.6045	1.6585	1.7149	1.7738
Extra capacity - maximum day	0.8436	0.8704	0.8983	0.9274	0.9578	0.9894
Extra capacity - maximum hour	0.1621	0.1661	0.1702	0.1745	0.1788	0.1832
Total	2.5088	2.5893	2.6731	2.7604	2.8514	2.9464
Commercial/Industrial:						
Base	1.5032	1.5528	1.6045	1.6585	1.7149	1.7738
Extra capacity - maximum day	0.3327	0.3433	0.3543	0.3658	0.3777	0.3902
Extra capacity - maximum hour	0.1092	0.1119	0.1147	0.1176	0.1205	0.1235
Total	1.9451	2.0080	2.0735	2.1418	2.2131	2.2874

Water Rates Step 5A – Proposed Conservation Pricing Rates

- Assumes variable monthly base charges
- 3 outer consumption blocks for residential @ 10% increase per block
- 1 outer consumption block for commercial @ 10% increase
- Eliminates summer discount pricing

	2013	2014	2015	2016	2017	2018
Inside City:						
Base charge (monthly)						
Meter Size:						
5/8" x 3/4"	$ 15.75	$ 16.14	$ 16.54	$ 16.92	$ 17.30	$ 17.62
3/4" x 3/4"	15.75	16.14	16.54	16.92	17.30	17.62
1 inch	26.25	26.90	27.57	28.20	28.83	29.37
1 & 1/2 inch	52.50	53.80	55.13	56.40	57.67	58.73
2 inch	84.00	86.08	88.21	90.24	92.27	93.97
3 inch	183.75	188.30	192.97	197.40	201.83	205.57
4 inch	315.00	322.80	330.80	338.40	346.00	352.40
Use Charge ($/Ccf)						
Residential and Multifamily						
Zero to 300 cubic feet	-	-	-	-	-	-
400 cubic feet to1,900 cubic feet	1.67	1.73	1.78	1.84	1.90	1.96
2,000 cubic feet to 3,800 cubic feet	1.84	1.90	1.96	2.02	2.09	2.16
3,900 cubic feet to 5,700 cubic feet	2.01	2.07	2.14	2.21	2.28	2.36
Over 5,700 cubic feet	2.17	2.24	2.32	2.39	2.47	2.55
Commercial/Industrial						
Zero to 300 cubic feet	-	-	-	-	-	-
400 cubic feet to 50,000 cubic feet	1.30	1.34	1.38	1.43	1.48	1.52
Over 50,000 cubic feet	1.43	1.47	1.52	1.57	1.62	1.68
Outside City:						
Base charge (monthly)						
Meter Size:						
5/8" x 3/4"	31.50	32.28	33.08	33.84	34.60	35.24
3/4" x 3/4"	31.50	32.28	33.08	33.84	34.60	35.24
1 inch	52.50	53.80	55.13	56.40	57.67	58.73
1 & 1/2 inch	105.00	107.60	110.27	112.80	115.33	117.47
2 inch	168.00	172.16	176.43	180.48	184.53	187.95
3 inch	367.50	376.60	385.93	394.80	403.67	411.13
4 inch	630.00	645.60	661.60	676.80	692.00	704.80
Use Charge ($/Ccf)						
Residential and Multifamily						
Zero to 300 cubic feet	-	-	-	-	-	-
400 cubic feet to 2,300 cubic feet	2.51	2.59	2.67	2.76	2.85	2.95
2,400 cubic feet to 4,300 cubic feet	2.76	2.85	2.94	3.04	3.14	3.24
4,400 cubic feet to 6,300 cubic feet	3.01	3.11	3.21	3.31	3.42	3.54
Over 6,400 cubic fee	3.26	3.37	3.47	3.59	3.71	3.83
Commercial/Industrial						
Zero to 300 cubic feet	-	-	-	-	-	-
400 cubic feet to 50,000 cubic feet	1.95	2.01	2.07	2.14	2.21	2.29
Over 50,000 cubic feet	2.14	2.21	2.28	2.36	2.43	2.52

Appendix B – Wastewater Rate Model Output Tables

Sewer Rates – Step 1

- Determine system cost factors based on actual demand

City of Dallas
Wastewater Rate Study Update - 2012
Wastewater Treatment Plant Balance - 2011

	Flow		BOD		TSS	
	Million Gallons	Ccf	Pounds	mg/l	Pounds	mg/l
Observed Plant Loadings - 2011	**831.03**	**1,110,854**	**659,207**	**95**	**1,026,651**	**148**
Customer Contributions - Fiscal 2011:						
Single family residential	264.42	353,462	441,121	200	441,121	200
Multi-family residential	118.31	158,145	197,365	200	197,365	200
Commercial I	66.98	89,538	111,743	200	111,743	200
Commercial II	0.00	0	0	250	0	250
Commercial III	0.00	0	0	300	0	300
High Strength (based on annual metered flow)	0.00	0	0	350	0	350
Total customer contributions to plant loadings	449.72	601,145	750,229	200	750,229	200
Total customer contributions as a percent of plant loadings	54%	54%	114%		73%	
Imputed Infiltration and Inflow (I&I) Contributions:	381.31	509,709	(91,022)		276,422	
I&I as a percent of observed loadings	46%	46%	-14%		27%	
Total Customer and Imputed I&I Contributions	**831.03**	**1,110,854**	**659,207**	**95**	**1,026,651**	**148**

Sewer Rates – Step 2

- Group customers with similar usage characteristics

City of Dallas
Forecast of Wastewater System Demand Constituents

	BOD mg/l	TSS mg/l	Actual 2012	Budget 2013	Forecast 2014	2015	2016	2017	2018
Standard conversion factors:									
(mg/l) --> (lbs/ccf) 0.00624									
Billable Flow (Q): Ccf									
Single Family Residential (based on winter average)			353,462	355,229	357,005	358,790	360,584	362,387	364,199
Multi-Family (based on annual metered flow)			158,145	158,936	159,730	160,529	161,332	162,138	162,949
Commercial I domestic strength (based on annual metered flow)			89,538	89,986	90,436	90,888	91,342	91,799	92,258
Commercial II medium strenght (based on annual metered flow)			0	0	0	0	0	0	0
Commercial III high strength (based on annual metered flow)			0	0	0	0	0	0	0
High Strength (based on annual metered flow)			0	0	0	0	0	0	0
Total billable flow (Q) Ccf			601,145	604,151	607,171	610,207	613,258	616,325	619,406
Biochemical Oxygen Demand (BOD) Pounds:									
Single Family Residential (based on winter average)	200		441,121	443,326	445,543	447,771	450,009	452,259	454,521
Multi-Family (based on annual metered flow)	200		197,365	198,352	199,344	200,340	201,342	202,349	203,360
Commercial I domestic strength (based on annual metered flow)	200		111,743	112,302	112,864	113,428	113,995	114,565	115,138
Commercial II medium strenght (based on annual metered flow)	250		0	0	0	0	0	0	0
Commercial III high strength (based on annual metered flow)	300		0	0	0	0	0	0	0
High Strength (based on annual metered flow)	350		0	0	0	0	0	0	0
Total billable pounds BOD			750,229	753,980	757,750	761,539	765,346	769,173	773,019
Total Suspended Solids (TSS) Pounds:									
Single Family Residential (based on winter average)		200	441,121	443,326	445,543	447,771	450,009	452,259	454,521
Multi-Family (based on annual metered flow)		200	197,365	198,352	199,344	200,340	201,342	202,349	203,360
Commercial I domestic strength (based on annual metered flow)		200	111,743	112,302	112,864	113,428	113,995	114,565	115,138
Commercial II medium strenght (based on annual metered flow)		250	0	0	0	0	0	0	0
Commercial III high strength (based on annual metered flow)		300	0	0	0	0	0	0	0
High Strength (based on annual metered flow)		350	0	0	0	0	0	0	0
Total billable pounds TSS			750,229	753,980	757,750	761,539	765,346	769,173	773,019
Customer Accounts:									
Single Family Residential (based on winter average)			3,946	3,966	3,986	4,006	4,026	4,046	4,066
Multi-Family Dwelling Units(based on annual metered flow)			1,623	1,631	1,639	1,647	1,655	1,664	1,672
Commercial I domestic strength (based on annual metered flow)			257	258	259	261	262	263	264
Commercial II medium strenght (based on annual metered flow)			0	0	0	0	0	0	0
Commercial III high strength (based on annual metered flow)			0	0	0	0	0	0	0
High Strength (based on annual metered flow)			0	0	0	0	0	0	0
Total customer accounts and dwelling units			5,826	5,855	5,884	5,914	5,943	5,973	6,003

Sewer Rates – Step 3

- Allocate costs to customer classes proportionate to system demands

Variable **Fixed**

	Flow (Q)	Strength of Discharge BOD	Strength of Discharge TSS	Customer Accounts	Industrial Pre-treatment	Storm	Total
Forecast Year: **2013**							
Gross Revenue Requirements							
Personal services	283,204	70,423	70,385	106,911	-	56,577	587,500
Materials and services	110,871	27,570	27,555	1,315,355	-	22,149	1,503,500
Capital outlays	76,513	6,593	6,589	10,009	-	5,297	105,000
Transfers	-	-	-	-	-	-	-
Debt Service:	-	-	-	1,005,650	-	-	1,005,650
Subtotal Gross Revenue Requirements	470,587	104,586	104,530	2,437,925	-	84,022	3,201,650
Revenue Offsets:	91,204	22,679	22,667	71,880	-	18,220	226,650
Net Revenues Required From Rates	$ 379,384	$ 81,907	$ 81,863	$ 2,366,045	$ -	$ 65,802	$ 2,975,000
Forecast Year: **2014**							
Gross Revenue Requirements							
Personal services	297,171	73,896	73,857	112,184	-	59,367	616,475
Materials and services	114,197	28,397	28,382	1,354,815	-	22,814	1,548,605
Capital outlays	78,808	6,791	6,787	10,309	-	5,455	108,150
Transfers	-	-	-	-	-	-	-
Debt Service:	-	-	-	1,004,550	-	-	1,004,550
Subtotal Gross Revenue Requirements	490,176	109,084	109,025	2,481,858	-	87,636	3,277,780
Revenue Offsets:	98,622	24,524	24,511	50,872	-	19,702	218,232
Net Revenues Required From Rates	$ 391,554	$ 84,560	$ 84,515	$ 2,430,986	$ -	$ 67,934	$ 3,059,548
Forecast Year: **2015**							
Gross Revenue Requirements							
Personal services	311,995	77,583	77,541	117,780	-	62,328	647,227
Materials and services	117,623	29,249	29,233	1,395,460	-	23,498	1,595,063
Capital outlays	81,172	6,994	6,991	10,618	-	5,619	111,395
Transfers	-	-	-	-	-	-	-
Debt Service:	-	-	-	1,183,580	-	-	1,183,580
Subtotal Gross Revenue Requirements	510,790	113,826	113,765	2,707,438	-	91,445	3,537,264
Revenue Offsets:	184,059	45,769	45,745	76,541	-	36,770	388,884
Net Revenues Required From Rates	$ 326,732	$ 68,057	$ 68,020	$ 2,630,896	$ -	$ 54,675	$ 3,148,381

Sewer Rates – Step 4 Calculate Base Charge

- For FY14 total monthly base charge is $35.39
- Storm component is $0.96 per account/DU
- Assumes MF is charged per dwelling unit

	Budget	Forecast				
	2013	2014	2015	2016	2017	2018
Base charge revenue requirements:						
Customer accounts	$ 2,366,045	$ 2,430,986	$ 2,630,896	$ 2,751,021	$ 2,800,461	$ 2,848,147
Industrial pre-treatment	-	-	-	-	-	-
Storm and surface water management	65,802	67,934	54,675	51,125	56,382	61,807
Total	2,431,847	2,498,920	2,685,572	2,802,146	2,856,842	2,909,954
Checksum	2,431,847	2,498,920	2,685,572	2,802,146	2,856,842	2,909,954
Number of equivalent accounts:						
Single Family Residential	3,966	3,986	4,006	4,026	4,046	4,066
Multi-Family Dwelling Units	1,631	1,639	1,647	1,655	1,664	1,672
Commercial I	258	259	261	262	263	264
Commercial II	0	0	0	0	0	0
Commercial III	0	0	0	0	0	0
High Strength	0	0	0	0	0	0
Total	5,855	5,884	5,914	5,943	5,973	6,003
Checksum	5,855	5,884	5,914	5,943	5,973	6,003
Number of equivalent bills per year:						
Single Family Residential	47,593	47,831	48,070	48,311	48,552	48,795
Multi-Family Dwelling Units	19,570	19,668	19,767	19,865	19,965	20,065
Commercial I	3,095	3,111	3,126	3,142	3,158	3,174
Commercial II	0	0	0	0	0	0
Commercial III	0	0	0	0	0	0
High Strength	0	0	0	0	0	0
Total	70,259	70,611	70,964	71,318	71,675	72,033
Base charge:						
Monthly						
Customer accounts	$ 33.6759	$ 34.4281	$ 37.0739	$ 38.5738	$ 39.0716	$ 39.5393
Industrial pre-treatment	-	-	-	-	-	-
Storm and surface water management	0.9366	0.9621	0.7705	0.7169	0.7866	0.8580
Total	$ 34.6125	$ 35.3902	$ 37.8443	$ 39.2906	$ 39.8583	$ 40.3973

Sewer Rates – Step 5 Calculate Use Charge

- Assumes domestic strength for SFR, MF, and Com I
- Assumes Medium strength for Com II
- Assumes High strength fro Com III
- Must amend development code to define new Com classes

	Budget	Forecast				
	2013	2014	2015	2016	2017	2018
Single Family Residential						
Sanitary flow and I&I	0.62796	0.64488	0.53544	0.50640	0.54923	0.59307
Strength - BOD	0.13557	0.13927	0.11153	0.10377	0.11387	0.12421
Strength - TSS	0.13550	0.13919	0.11147	0.10371	0.11381	0.12414
Total - $/Ccf	0.89904	0.92334	0.75845	0.71388	0.77691	0.84141
Multi-Family						
Sanitary flow and I&I	0.62796	0.64488	0.53544	0.50640	0.54923	0.59307
Strength - BOD	0.13557	0.13927	0.11153	0.10377	0.11387	0.12421
Strength - TSS	0.13550	0.13919	0.11147	0.10371	0.11381	0.12414
Total - $/Ccf	0.89904	0.92334	0.75845	0.71388	0.77691	0.84141
Commercial I						
Sanitary flow and I&I	0.62796	0.64488	0.53544	0.50640	0.54923	0.59307
Strength - BOD	0.13557	0.13927	0.11153	0.10377	0.11387	0.12421
Strength - TSS	0.13550	0.13919	0.11147	0.10371	0.11381	0.12414
Total - $/Ccf	0.89904	0.92334	0.75845	0.71388	0.77691	0.84141
Commercial II						
Sanitary flow and I&I	0.62796	0.64488	0.53544	0.50640	0.54923	0.59307
Strength - BOD	0.16947	0.17409	0.13941	0.12971	0.14234	0.15526
Strength - TSS	0.16938	0.17399	0.13934	0.12964	0.14226	0.15517
Total - $/Ccf	0.96680	0.99296	0.81420	0.76575	0.83383	0.90350
Commercial III						
Sanitary flow and I&I	0.62796	0.64488	0.53544	0.50640	0.54923	0.59307
Strength - BOD	0.20336	0.20890	0.15565	0.15565	0.17080	0.18631
Strength - TSS	0.20325	0.20879	0.15557	0.15557	0.17071	0.18621
Total - $/Ccf	1.03457	1.06258	0.84667	0.81762	0.89075	0.96558
High Strength						
Sanitary flow and I&I - $/Ccf	0.62796	0.64488	0.53544	0.50640	0.54923	0.59307
BOD - $/lb	0.23725	0.24372	0.19518	0.18160	0.19927	0.21736
TSS - $/lb	0.23713	0.24359	0.19507	0.18150	0.19916	0.21724
Total - $/Ccf	1.10234	1.13219	0.92570	0.86949	0.94767	1.02767

Sewer Rates – Step 6 Proposed Rates

- Assumes SFR continues to be billed on flat rates
- All other classes to be billed on real time consumption basis

Line Item Description	Budget 2013	Forecast 2014	2015	2016	2017	2018
Consumption Based Rates:						
Customer Account Service (BASE) Charges:						
Inside City monthly	$ 34.61247	$ 35.39017	$ 37.84435	$ 39.29063	$ 39.85826	$ 40.39729
Commodity (USE) Charges:						
Single Family Residential						
Sanitary flow and I&I	0.62796	0.64488	0.53544	0.50640	0.54923	0.59307
Strength - BOD	0.13557	0.13927	0.11153	0.10377	0.11387	0.12421
Strength - TSS	0.13550	0.13919	0.11147	0.10371	0.11381	0.12414
Total - $/Ccf	$ 0.89904	$ 0.92334	$ 0.75845	$ 0.71388	$ 0.77691	$ 0.84141
Multi-Family						
Sanitary flow and I&I	0.62796	0.64488	0.53544	0.50640	0.54923	0.59307
Strength - BOD	0.13557	0.13927	0.11153	0.10377	0.11387	0.12421
Strength - TSS	0.13550	0.13919	0.11147	0.10371	0.11381	0.12414
Total - $/Ccf	$ 0.89904	$ 0.92334	$ 0.75845	$ 0.71388	$ 0.77691	$ 0.84141
Commercial I						
Sanitary flow and I&I	0.62796	0.64488	0.53544	0.50640	0.54923	0.59307
Strength - BOD	0.13557	0.13927	0.11153	0.10377	0.11387	0.12421
Strength - TSS	0.13550	0.13919	0.11147	0.10371	0.11381	0.12414
Total - $/Ccf	$ 0.89904	$ 0.92334	$ 0.75845	$ 0.71388	$ 0.77691	$ 0.84141
Commercial II						
Sanitary flow and I&I	0.62796	0.64488	0.53544	0.50640	0.54923	0.59307
Strength - BOD	0.16947	0.17409	0.13941	0.12971	0.14234	0.15526
Strength - TSS	0.16938	0.17399	0.13934	0.12964	0.14226	0.15517
Total - $/Ccf	$ 0.96680	$ 0.99296	$ 0.81420	$ 0.76575	$ 0.83383	$ 0.90350
Commercial III						
Sanitary flow and I&I	0.62796	0.64488	0.53544	0.50640	0.54923	0.59307
Strength - BOD	0.20336	0.20890	0.15565	0.15565	0.17080	0.18631
Strength - TSS	0.20325	0.20879	0.15557	0.15557	0.17071	0.18621
Total - $/Ccf	$ 1.03457	$ 1.06258	$ 0.84667	$ 0.81762	$ 0.89075	$ 0.96558
High Strength						
Sanitary flow and I&I - $/Ccf	0.62796	0.64488	0.53544	0.50640	0.54923	0.59307
BOD - $/lb	0.23725	0.24372	0.19518	0.18160	0.19927	0.21736
TSS - $/lb	0.23713	0.24359	0.19507	0.18150	0.19916	0.21724
Total - $/Ccf	$ 1.10234	$ 1.13219	$ 0.92570	$ 0.86949	$ 0.94767	$ 1.02767
Flat Monthly Rates:						
Single Family Residential flat rate:						
BASE charge	$ 34.61	$ 35.39	$ 37.84	$ 39.29	$ 39.86	$ 40.40
USE charge	6.29	6.46	5.31	5.00	5.44	5.89
Total - $/account/month	$ 40.91	$ 41.85	$ 43.15	$ 44.29	$ 45.30	$ 46.29

Note: High strength customers that contribute wastewater that exceed a strength threshold of 350 mg/l BOD or 350 mg/l TSS will be charged based on their actual flow and load.

Appendix C – SDC Models Output Tables

Water SDC Calculations

Existing and Future Water Demand

Dallas, Oregon
Water System Development Charge Study - 2013
Forecasted Growth in Meter Equivalents

Year	Forecasted Growth Rate	Meter Equivalents		
		Beginning of Year[1]	Additions[2]	End of Year
2012	0.50%			7,198
2013	0.50%	7,198	36	7,234
2014	0.50%	7,234	36	7,270
2015	0.50%	7,270	36	7,307
2016	0.50%	7,307	37	7,343
2017	0.50%	7,343	37	7,380
2018	0.50%	7,380	37	7,417
2019	0.50%	7,417	37	7,454
2020	0.50%	7,454	37	7,491
2021	0.50%	7,491	37	7,528
2022	0.50%	7,528	38	7,566
2023	0.50%	7,566	38	7,604
2024	0.50%	7,604	38	7,642
2025	0.50%	7,642	38	7,680
2026	0.50%	7,680	38	7,719
2027	0.50%	7,719	39	7,757
2028	0.50%	7,757	39	7,796
2029	0.50%	7,796	39	7,835
2030	0.50%	7,835	39	7,874
2031	0.50%	7,874	39	7,913
2032	0.50%	7,913	40	7,953
			755	

[1] Source - Dallas utility billing records, 2012

[2] Source - Dallas planning documents

Water Reimbursement Fee Calculations

Dallas, Oregon
Water SDC - 2013
Reimbursement Fee Calculations
Financial Data as of Fiscal Year Ended June 30, 2011

Utility Plant-in-Service (original cost):[1]		
160 Land	$	58,245
162 Infrastructure		19,573,940
164 Machinery and equipment		-
165 Auto & trucks		-
176 Construction Work-in-Progress		-
Total Utility Plant-in-Service		19,632,185
Accumulated depreciation[1]		
160 Land		-
162 Infrastructure		5,261,127
164 Machinery and equipment		-
165 Auto & trucks		-
176 Construction Work-in-Progress		-
Total accumulated depreciation		5,261,127
Book value of water utility plant-in-service @ June 30, 2011		14,371,058
Eliminating entries:		
Principal outstanding on bonds, notes, and loans payable		-
2005 Water FF&C refunding bonds		369,000
2008 OECDD Safe Drinking Water Loan		4,821,350
Developer Contributions		-
Grants, net of amortization		-
Total eliminating entries		5,190,350
Net basis in utility plant-in-service available to serve future customers	$	9,180,708
Estimated existing and future Meter Equivalents (MEs)		7,953
Calculated reimbursement fee - $/ME	$	1,154

[1] Source: Dallas Asset Depreciation Report 6/30/11

Water Improvement Fee Calculations

Dallas, Oregon
Water SDC - 2013
Allocation of Water Capital Improvement Projects to Existing and Future Customers[1]

Project Description	Estimated Cost of Improvement in 2012 Dollars	Project Costs		
		Cost Attributed to Existing Demands	Costs Attributed to Future Demands	Total Costs
Pipe Replacements	$150,000	$150,000	$0	$150,000
Outlet Pipe Modifications at Mercer Reservoir	150,000	150,000	-	150,000
Line – Plant to Clay (upsized)	1,500,000	1,005,000	495,000	1,500,000
Upper Douglas High Pressure Feeder Line	150,000	75,000	75,000	150,000
New Influent Pump	75,000	-	75,000	75,000
Contact Basin Weirs	50,000	50,000	-	50,000
On-site Chlorine Generation	400,000	300,000	100,000	400,000
Automated Meter Reading Project	2,000,000	2,000,000	-	2,000,000
Aquifer Storage and Recovery #2 and #3	1,500,000	-	1,500,000	1,500,000
Totals	$5,975,000	$3,730,000	$2,245,000	$5,975,000

Total Improvement Fee Eligible Costs for Future System Improvements	$2,245,000
Total Growth in Meter Equivalents (20 year forecast)	755
Calculated Water Improvement Fee SDC per Meter Equivalent	$2,973

Proposed Schedule of Water SDCs

City of Dallas
Schedule of Proposed Water System Development Charges
Water SDC Update - 2013

Meter Size	AWWA Rated Flow (GPM)*	Flow Factor Equivalence	Proposed Schedule of Water SDCs		
			Reimbursement	Improvement	Total
0.75"x 0.75"	15	1.00	1,154	2,973	$ 4,127
1.00 inch	25	1.67	1,923	4,955	6,878
1.50 inch	50	3.33	3,847	9,910	13,757
2.00 inch	80	5.33	6,155	15,856	22,011
3.00 inch	175	11.67	13,463	34,685	48,148
4.00 inch	300	20.00	23,080	59,460	82,540
6.00 inch	625	41.67	48,083	123,875	171,958
8.00 inch	900	60.00	69,240	178,380	247,620

* Recommended maximum rate for continuous operations; per American Water Works Association standards effective January 1, 2003 for cold water meters- displacement type, bronze main case. ANSI approval October 11, 2002. American Water Works Association ANSI/AWWA C700-02 (Revision of ANSI/AWWA C700-95).

Wastewater SDC Calculations

Existing and Future Wastewater Demand

Dallas, Oregon
Wastewater System Development Charge Study - 2013
Forecasted Growth in Equivalent Residential Units

Year	Forecasted Growth Rate	Equivalent Residential Units		
		Beginning of Year[1]	Additions[2]	End of Year
2012	0.50%	5,855	29	6,082
2013	0.50%	6,082	30	6,112
2014	0.50%	6,112	31	6,143
2015	0.50%	6,143	31	6,174
2016	0.50%	6,174	31	6,205
2017	0.50%	6,205	31	6,236
2018	0.50%	6,236	31	6,267
2019	0.50%	6,267	31	6,298
2020	0.50%	6,298	31	6,330
2021	0.50%	6,330	32	6,361
2022	0.50%	6,361	32	6,393
2023	0.50%	6,393	32	6,425
2024	0.50%	6,425	32	6,457
2025	0.50%	6,457	32	6,489
2026	0.50%	6,489	32	6,522
2027	0.50%	6,522	33	6,554
2028	0.50%	6,554	33	6,587
2029	0.50%	6,587	33	6,620
2030	0.50%	6,620	33	6,653
2031	0.50%	6,653	33	6,687
2032	0.50%	6,687	33	6,720
			638	

[1] Source - Dallas utility billing records, 2012

[2] Source - Dallas planning documents; Note that 20 year growth in ERUs = 9% of total customer base

Wastewater Reimbursement Fee Calculations

Dallas, Oregon
Wastewater SDC - 2013
Reimbursement Fee Calculations
Financial Data as of Fiscal Year Ended June 30, 2011

Utility Plant-in-Service (original cost):[1]		
160 Land	$	795,736
162 Infrastructure		30,478,432
164 Machinery and equipment		-
165 Auto & trucks		-
176 Construction Work-in-Progress		-
Total Utility Plant-in-Service		31,274,168
Accumulated depreciation[1]		
160 Land		-
162 Infrastructure		12,913,504
164 Machinery and equipment		-
165 Auto & trucks		-
176 Construction Work-in-Progress		-
Total accumulated depreciation		12,913,504
Book value of sewer utility plant-in-service @ June 30, 2011		18,360,664
Eliminating entries:		
Principal outstanding on bonds, notes, and loans payable:		
Series 1998 OECDD/SPWF loan:		240,655
DEQ SRF Loan (refunded by Series 2011 Full Faith & Credit Refunding Obligations)		8,071,097
Developer Contributions		-
Grants, net of amortization		-
Total eliminating entries		8,311,752
Net basis in utility plant-in-service available to serve future customers	$	10,048,912
Estimated existing and future Equivalent Residential Units (ERUs)		6,720
Calculated reimbursement fee - $/ERU	$	1,495

[1] Source: Dallas Asset Depreciation Report 6/30/11; 2 storm water projects noted in wastewater assets transferred to storm SDC

Wastewater Improvement Fee Calculations

Dallas, Oregon
Wastewater SDC - 2013
Allocation of Wastewater Capital Improvement Projects to Existing and Future Customers[1]

Project Description	Estimated Cost of Improvement in 2012 Dollars	Project Costs		
		Cost Attributed to Existing Demands	Costs Attributed to Future Demands	Total Costs
Purple Pipe Projects	$2,700,000	1,350,000	1,350,000	2,700,000
Siphon Replacement	300,000	201,000	99,000	300,000
CMOM Program	400,000	280,000	120,000	400,000
River Dr. Pump Station Bypass	500,000	450,000	50,000	500,000
Rickreal & Ash Creek Interceptor Sealing/Pipe Lining	1,600,000	800,000	800,000	1,600,000
Totals	$5,500,000	$3,081,000	$2,419,000	$5,500,000

Total Improvement Fee Eligible Costs for Future System Improvements	$2,419,000
Total Growth in ERUs (20 year forecast)	638
Calculated Sewer Improvement Fee SDC per ERU	$3,792

Proposed Schedule of Wastewater SDCs

City of Dallas
Schedule of Proposed Wastewater System Development Charges
Wastewater SDC Update - 2013

Meter Size	AWWA Rated Flow (GPM)*	Flow Factor Equivalence	Proposed Schedule of Wastewater SDCs		
			Reimbursement	Improvement	Total
0.75"x 0.75"	15	1.00	1,495	3,792	$ 5,287
1.00 inch	25	1.67	2,492	6,320	8,812
1.50 inch	50	3.33	4,983	12,640	17,623
2.00 inch	80	5.33	7,973	20,224	28,197
3.00 inch	175	11.67	17,442	44,240	61,682
4.00 inch	300	20.00	29,900	75,840	105,740
6.00 inch	625	41.67	62,292	158,000	220,292
8.00 inch	900	60.00	89,700	227,520	317,220

* Recommended maximum rate for continuous operations; per American Water Works Association standards effective January 1, 2003 for cold water meters- displacement type, bronze main case. ANSI approval October 11, 2002. American Water Works Association ANSI/AWWA C700-02 (Revision of ANSI/AWWA C700-95).

Stormwater SDC Calculations

Existing and Future Stormwater System Demand

Dallas, Oregon
Storm Water System Development Charge Study - 2013
Forecasted Growth in Equivalent Residential Units

Year	Forecasted Growth Rate	Equivalent Residential Units		
		Beginning of Year	Additions	End of Year
2012	0.50%	4,227	21	4,248
2013	0.50%	4,248	21	4,269
2014	0.50%	4,269	21	4,291
2015	0.50%	4,291	21	4,312
2016	0.50%	4,312	22	4,334
2017	0.50%	4,334	22	4,355
2018	0.50%	4,355	22	4,377
2019	0.50%	4,377	22	4,399
2020	0.50%	4,399	22	4,421
2021	0.50%	4,421	22	4,443
2022	0.50%	4,443	22	4,465
2023	0.50%	4,465	22	4,488
2024	0.50%	4,488	22	4,510
2025	0.50%	4,510	23	4,533
2026	0.50%	4,533	23	4,555
2027	0.50%	4,555	23	4,578
2028	0.50%	4,578	23	4,601
2029	0.50%	4,601	23	4,624
2030	0.50%	4,624	23	4,647
2031	0.50%	4,647	23	4,670
2032	0.50%	4,670	23	4,694
			446	

Stormwater Reimbursement Fee Calculations

Dallas, Oregon
Storm Water SDC - 2013
Reimbursement Fee Calculations
Financial Data as of Fiscal Year Ended June 30, 2011

Utility Plant-in-Service (original cost):[1]			
160	Land	$	-
162	Infrastructure		44,476
164	Machinery and equipment		-
165	Auto & trucks		-
176	Construction Work-in-Progress		-
	Total Utility Plant-in-Service		44,476
Accumulated depreciation[1]			
160	Land		-
162	Infrastructure		1,334
164	Machinery and equipment		-
165	Auto & trucks		-
176	Construction Work-in-Progress		-
	Total accumulated depreciation		1,334
Book value of culinary storm drainage utility plant-in-service @ June 30, 2011			43,142
Eliminating entries:			
	Principal outstanding on bonds, notes, and loans payable		-
	Developer Contributions		-
	Grants, net of amortization		-
	Total eliminating entries		-
Net basis in utility plant-in-service available to serve future customers		$	43,142
Estimated existing and future Equivalent Residential Units (ERUs)			4,694
Calculated reimbursement fee - $/ERU		$	9

[1] Source: Dallas records

Stormwater Improvement Fee Calculations

Dallas, Oregon
Storm Water SDC - 2013
Allocation of Storm Water Capital Improvement Projects to Existing and Future Customers[1]

Project Description	Estimated Cost of Improvement in 2012 Dollars	Project Costs		
		Cost Attributed to Existing Demands	Costs Attributed to Future Demands	Total Costs
Monmouth Cutoff Highway – Ash Creek	$1,600,000	$1,200,000	$400,000	$1,600,000
Kings Valley Highway – NE Quadrant	20,000	20,000	0	20,000
Storm Master Plan	100,000	25,000	75,000	100,000
Totals	$1,720,000	$1,245,000	$475,000	$1,720,000

Total Improvement Fee Eligible Costs of Future System Improvements	$475,000
Total Growth in Equivalent Dwelling Units (ERU) (20 year forecast)	446
Calculated Storm Drainage Improvement Fee SDC per ERU	$1,066

Proposed Schedule of Stormwater SDCs

Dallas, Oregon
Storm Water SDC Study - 2012 Update
Proposed Schedule of Storm Water SDCs

	$/ERU
Reimbursement	$9
Improvement	$1,066
Total	$1,075